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THE
NUMISMATIC CHRONICLE
AND
JOURNAL OF
THE ROYAL NUMISMATIC SOCIETY

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NUMISMATIC CHRONICLE
AND
JOURNAL
OF THE
ROYAL NUMISMATIC SOCIETY

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CONTENTS.

ANCIENT NUMISMATICS.

	PAGE
BLUNT, C. E.—Roman Coins from Norfolk	316
GABRICI, ETTORE.—Notes on Sicilian Numismatics	73
GOODACRE, HUGH.—Notes on Some Rare Byzantine Coins	151
HILL, GEORGE F.—A Hoard of Coins from Nineveh	160
MATTINGLY, HAROLD.—A Late Roman Hoard from Corinth	229
——— Coins in Lincoln Museum	313
——— Alexandrian Coins of Antinous	315
MILNE, J. GRAFTON.—The Coinage of the Eleians	171
NEWELL, E. T.—Additions to the Delta (Benha el-Asl) Hoard	66
OMAN, SIR CHARLES.—The First Forth Bridge, A.D. 209	137
O'NEIL, B. H. ST. JOHN.—The Coins Found at the Camborne Roman Villa	233
——— The Nobottle Theodosian Hoard (Corrigenda)	321
PEARCE, J. W. E.—A Late Hoard of Æ^3 and Æ^4 from Egypt	318
——— An Eastern Hoard of Late Æ	319
PINK, KARL.—The Bronze Medallions of Gordianus III.	249
ROBINSON, E. S. G.—Further Notes on the Delta (Benha el-Asl) Hoard	68
SALISBURY, F. S.—Late Fourth-Century Currency in Britain	14
SYDENHAM, REV. E. A.—Symbols on Denarii of L. Papius and L. Roscius	1

ENGLISH NUMISMATICS

	PAGE
BLUNT, C. E.—The Mint of Berwick-on-Tweed under Edward I, II, III	28
BROOKE, GEORGE C.—A Find of Nobles at Borth (Cardiganshire)	53
——— Two Unpublished English Medals	62
——— An Anglo-Saxon Find (<i>temp.</i> Edward the Elder—Æthelstan)	133
HILL, GEORGE F.—Some Dates in the Career of Pisanello	181
LAWRENCE, L. A.—On a Silver Standard for the Coinage of Edward I	197
——— The Durham Hoard of Edward I-III	201
MABBOTT, THOMAS OLLIVE: Notes on Some Rare or Unpublished Seventeenth-Century Tokens	131
WELLS, W. C.—The Pipe Rolls and 'Defalta Monetriorum'	261
TREASURE-TROVE.—Note on	135

ORIENTAL NUMISMATICS.

R. B. WHITEHEAD.—The Portrait Medals and Zodiacal Coins of the Emperor Jahāngīr. Part II: The Zodiacal Coins	91
WRIGHT, H. NELSON.—The Coinage of the Sultāns of Mālwa	291

REVIEWS.

BOEHRINGER, ERICH.—Die Münzen von Syrakus	242
BUCKNILL, SIR JOHN.—The Coins of the Dutch East Indies	240
GALLATIN, ALBERT.—Syracusan Dekadrachms of the Euainetos type	245
GIESECKE, W.—Das Ptolemäergeld	238

CONTENTS.

vii

	PAGE
GOODACRE, HUGH.—A Handbook of the Coinage of the Byzantine Empire, Part II	72
MACDONALD, SIR GEORGE.—Roman Britain, 1914-1928	243
NOE, SIDNEY P.—The Coinage of Metapontum, Part II .	247
Preliminary Report upon the Excavations at Tel Umar .	244
Quarterly of the Department of Antiquities in Palestine, I, 1 and 2	241
REGLING, KURT.—Der griechische Goldschatz von Prin- kipo	246
STRACK, PAUL L.—Untersuchungen zur römischen Reichsprägung des zweiten Jahrhunderts, Teil I .	235
Sylloge Nummorum Graecorum. Vol. I, Part I . . .	248

PLATES.

- I-II. Coins of Berwick Mint.
- III. Nobles from the Borth Find.
- IV. Two Historical English Medals.
- V-VI. Sicilian Coins.
- VII-X. Zodiacal Coins.
- XI. Byzantine Coins.
- XII. Barbarous Coins from Lincoln: and Coins of Antinous.
- XIII. Coins of Mälwā.

PROCEEDINGS OF THE SOCIETY.

LIST OF FELLOWS.



I.

SYMBOLS ON DENarii OF L. PAPIUS AND L. ROSCIUS.

THE small symbols that occur on numerous issues of the Roman Republic are as a rule unrelated to the main obverse and reverse types. This fact, instead of throwing them into insignificance, as trifles scarcely worth considering, in reality gives them an importance which, from a numismatic point of view, cannot well be exaggerated.

On coins of the Republic the obverse and reverse types seldom refer directly to contemporary events. Allusions to the moneyer's ancestors or provenance, and types of a legendary or mythological character, are the rule; and although indirectly they may be appropriate to the times in which the coins were struck, as often as not the connexion is obscure. On the other hand, the symbols, so far as they can be interpreted, always appear to refer either to the moneyer, the mint, or the specific purpose for which the coin was issued. That is to say, they always have a direct bearing on contemporary ideas or events.

To attempt to deal with the symbols on republican coins generally is impossible within the limits of a single paper. Nor are general conclusions as to their purpose and meaning worth much, since the use of symbols varied considerably at different times. Each group of symbols, therefore, requires to be studied on its own merits.

In the present paper I propose to consider two of the largest, and in some ways most remarkable, groups of symbols that occur on denarii of the first century B. C., namely, those of L. Papius and L. Roscius Fabatus. The denarii of these moneyers belong to the class known as *serrati*, and are among the commonest coins of the Republic.

(a) *The denarii of L. Papius.*

Obv.—Head of Juno Sospita (Caprotina) r., wearing goat-skin tied under chin. Behind head, symbol.

Rev.—Gryphon running r.; in ex., L. PAPI., in field, symbol.

The types are fully explained in *Coins of the Roman Republic, B.M.C.*, vol. i, p. 370, and allude to the sacred rites of Juno Caprotina at Lanuvium, with which city the moneyer's family seems to have been connected. But beyond this nothing appears to be known about L. Papius. So that, although we have here one of the largest issues of serrated denarii of the first century B. C. the main types give us no clue as to when or why the coins were struck.

Turning to the symbols, however, we find a living element which the types lack.

Two symbols occur on every coin; one on the obverse and one on the reverse. In all cases the one is directly related to the other. Of these pairs Mr. Grueber enumerates 119 and Babelon 150. Probably there are others not hitherto published.

This pairing of symbols—a new departure on the republican coinage—makes it very much easier to arrive at their meaning. Obviously, symbols such as these cannot be regarded merely as equivalents to

sequence letters or numerals or marks for distinguishing dies, such as we find on denarii of L. Calpurnius Piso or C. Marius. Nor is it reasonable to suppose that they are a miscellaneous assortment of devices chosen haphazard. Rather they indicate a definite plan of selection evidently with the purpose of emphasizing definite ideas.

These 150, or more, pairs of symbols cover a pretty wide range and, although in some cases one cannot be sure what objects they are intended to represent, the large majority of them plainly illustrate in a kind of pictorial shorthand the various trades and professions included in the trades-guilds (*collegia opificum*) of Rome. Without going through the whole list, the following examples taken from the *B.M.C.* will be sufficient to prove that this is pretty certainly their meaning.

Carpenters are represented by the following pairs of symbols : chisel—mallet (G. 30),¹ drill—compasses (41), drill—plane (42), gimlet (or pick)—hammer (48), hook for raising timber—pulley (62).

Builders : Base of column—Corinthian capital (21), plasterer's float—trowel (40), pentagram—builder's square (78).

Metal-workers : Anvil—tongs (4), candelabrum—fire-dog (16), lantern—snuffers (68), lock—key (70).

Wine-vendors (including *potters*) : Two amphorae (1), amphora—hydria (2), amphora—tripod for amphora (3), beaker—jug (11), bucket—wine-skin (12), crater—amphora (27), shallow cup—rhyton (38), beaker—two-handled vase (10), ampullae with strings for suspension (110, 111), funnel strainer—amphora (99), goblet—wine-skin (51, 52), bowl with handle—saucer with handle (77).

¹ The reference numbers are to Plate on p. 371 of *Coins of the Roman Republic*, *B.M.C.*, vol. i.

Greengrocers: Basket of grapes—basket of fruit (7), turnip—carrot (107).

Fishmongers: Crab—fish (26), dolphin—tunny-fish (39), cray-fish—octopus (28).

Cobblers: Boot with strap—shoe on last (9), two sandals (84).

Butchers: Block—butcher's knife (105), bucranium—bipennis (14).

Wheelwrights: Wheel with four spokes—wheel with eight spokes (115).

Basket-makers: Two baskets (8).

Cooks and bakers: Cooking pot with hook—triple flesh-hook (13), cooking vessel—ladle (24), flesh-hook—ladle (63), baker's shovel—baker's oven (89).

Weavers: Carding comb—spatula (22), distaff—two reels (37), spindle—distaff (94).

Oil merchants: Cruse for oil—lamp (32), vase with spout—lamp feeder (109).

Artisans: Crowbar—pick (31).

Musicians: Harp—lyre (58), two flutes—syrinx (46).

Tanners: Tanner's knife—scraper (85).

Athletes: Meta—weight (49), hand in caestus—torch (55), jug with handle—palm-branch (65).

Chiropodists: Human foot—hand holding lancet (47).

Clerks: Scroll—stilus (112), signet-ring—scroll in case (82).

Farmers and shepherds: Modius (75), sickle—basket (90), flail—basket (45), pump—bucket with handle (81), shepherd's crook—mask of Pan (69).

Sailors: Aplustre—prow (5), rudder—anchor (83).

Soldiers: Helmet—ancilia (?) (60), galerus—two spears (19), spear—saddle-cloth (92), spur—horse's muzzle (95), sword in sheath—trumpet (100), yoke—chariot (119).

Officials: Apex—simpulum (61), wreath—lituus (117).

The *collegia opificum* were of immemorial antiquity, some even, according to Plutarch, tracing their origin to the time of Numa. Besides trades and professions of

all kinds the *collegia* included associations of itinerant merchants, retired soldiers, sportsmen, and athletes; confraternities for numerous religious cults; also we find a sodality for the preservation of chastity along with clubs for late sleepers and late drinkers.²

During the first century B.C. the organization of industry through the *collegia* developed enormously. The growing luxury of Roman society stimulated the development of skilled handicrafts, and the contempt with which trade was regarded by the old aristocracy gave place to pride in honest industry. Moreover, as the older aristocratic caste tended to dwindle, senatorial houses were not infrequently raised from the industrial classes.

It was not until the last half-century of the Republic that the *collegia* assumed a political importance which caused them to be regarded as a menace to the public peace. Thus they were, with some exceptions, suppressed by a decree of the Senate in 64 B.C., but were revived, mainly for revolutionary purposes, by Clodius in 58 B.C.

Marius, we are told, made free use of the *collegia*, which were largely composed of slaves and people of the lower classes, for recruiting his partisans.

Having arrived at the meaning of the symbols with practical certainty, our next step is to discover the purpose of this booming of commercial interests on the public money and the particular date at which it is likely to have happened.

In his article on the "Roman serrati" ³ Mr. Mattingly

² On the *collegia opificum* see Dill, *Roman Society*, pp. 251-86; Mommsen, *De coll.*, p. 76; Saglio, *Dict. Antiq.*, under "Collegia".

³ *Num. Chron.*, 1924, p. 31 ff.

suggests that the denarii thus designated may be connected with democratic movements such as those of the Marian party. The denarii of L. Papius reveal their democratic character not only by their notched edges but still more by their symbols, which make a special appeal to classes hitherto little recognized in Roman politics, the shopkeeper, trader, artisan, and industrial class generally. The *serrati* of L. Papius, therefore, may very properly be described as one of the most democratic issues ever put into circulation by the Marian party.

In the article just referred to, Mr. Mattingly places the coins of L. Papius between the years 79 and 75 B. C.⁴ We are led, therefore, to inquire what particular date within this period is specially appropriate for so unusually large an issue of aggressively democratic coins. And here we need have little hesitation in fixing on the year 78 B. C., shortly after the death of Sulla.

The aristocratic constitution had been held together in the teeth of opposition by the iron hand of the Dictator. But on his death reaction was both violent and instantaneous. Even Sulla's funeral rites were not allowed to pass without disturbance, so bitter was the hatred of the late régime. Revolutionary schemes, many of them extravagant and unpractical, were in the air; and not only in Rome but throughout Italy appeared abundant material for a democratic outburst.

⁴ The date of L. Papius is given by Grueber (*Coins of the Rom. Rep.*, i, p. 370) as 80 B. C., by Babelon (vol. ii, p. 279) as 79 B. C., and by Mommsen (*Mon. rom.*, ii, p. 213) after 79 B. C. Mr. Mattingly's dating, which mainly agrees with Mommsen's, is confirmed by the evidence of finds.

At the moment the Consul, M. Aemilius Lepidus, whom Sulla apostrophized—so Plutarch tells us⁵—as the worst man in Rome, held the field. This curiously unbalanced person, who claims neither respect nor sympathy, declared loudly for the rescinding of all Sulla's schemes and the demolition of the Sullan constitution. And for a brief spell Lepidus had the Roman populace at his back.

Of the details of his policy, beyond the fact that he seems to have carried a bill for the distribution of cheap food, we are largely ignorant. But here perhaps the coins help to fill a gap.

The policy of distributing cheap food-stuffs was one that had been repeated scores of times with the same unvarying result. For the moment it secured the popular vote which ere long veered round to popular discontent. On the other hand, a simple ruse, by which not the food consumers but the food producers and tradesmen generally were put into a good temper, shows a shrewd appreciation of civil forces and also promised to be more lasting in its effect. It must have been distinctly flattering to the greengrocer, butcher, blacksmith, fishmonger, or wine-vendor to see his particular avocation brought into notice on the public money. Moreover, as a vote-catching device it almost amounts to a stroke of genius! Rather too good, perhaps, to be put to the credit of Lepidus! But whether or not he was personally responsible for the idea, it seems more than probable that it was during the brief period of his consulship that the aggressively democratic coinage of L. Papius was issued.

⁵ Plutarch, *Pomp.*

(b) *The denarii of L. Roscius Fabatus.*

Obv.—Head of Juno Sospita (as on coins of L. Papius); below, L. ROSCI.; behind, symbol.

Rev.—Girl standing r. feeding from her dress a serpent erect; in ex., FABATI; in field, symbol.

The close similarity between the coins of L. Roscius and L. Papius is at once obvious; e. g. (1) the obverse types are the same, (2) the reverse types allude to the worship of Juno at Lanuvium (for explanation of type see *Coins of the Rom. Rep.*, *B.M.C.*, i, p. 422 n.), (3) the symbols occur in related pairs, of which Babelon enumerates 155 and Grueber 109.

Although we learn nothing from the coins about L. Roscius, other than the provenance of his family, he is pretty certainly the Roscius who was lieutenant of Caesar in the Gallic war of 54 B. C., praetor in 49 B. C., acted as intermediary between Caesar and Pompey, and was killed in the battle of Mutina 43 B. C.⁶

As to the date at which he held the office of moneyer, and the purpose of his large issue of serrated denarii, we must seek information, as in the case of Papius, from the symbols.

In their general bearing the symbols present a close parallel to those on the denarii of L. Papius, although in no single instance do we find a pair of symbols identically alike on the coins of both moneyers. Individual symbols sometimes correspond, but they are either paired differently, or their position on obverse and reverse is transposed.

⁶ Cf. *B.M.C.*, i, p. 422; and Babelon, ii, p. 401.

The same democratic tone is evident. That is to say, symbols illustrative of various trades and professions predominate, and the objects chosen are mainly of a domestic or everyday character.

Trades and professions are represented as follows:

Carpenters and metal-workers: Anvil—hammer (4), awl—graving tool (7), anvil (or coin-die?)—hammer (85), two anvils (102), bench—carpenter's bag (11), metal-worker's bench—mallet (12), dividers—drill (Bab. 98),⁷ two planes (70).

Wine-vendors: Amphora—tripod for amphora (2), amphora—wine-skin (3), flask—bottle (86), jug with handle—bottle with strap (54), rhyton—cup (78), vine-leaf—bunch of grapes (100), wine-skin—bottle with two handles (105), wine-skin—drinking cup on stem (106).

Vendors of sundry domestic articles: Chair—lamp on stand (22), cooking-stove—cauldron (23), colander—ladle (25), hook—cooking-pot (47), jug on table—jug on stand (52), two keys (55), dish (patera)—jug (64), cooking-pot with handle—two hooks (71), cooking-pot—tripod stand (83), torch stand—torch (85), lamp bracket—lamp (86), perfume vase—jug with handle (98), candelabrum—stand (87), scales—box for weights (74).

Musicians: Two flutes—two lyre keys (37), lyre—lyre-key (57), tortoise—lyre (94), curved trumpet—straight trumpet (97).

Goldsmiths: Torque—two bracelets (93).

Clerks: Book—stilus (101), case for scrolls—bag with handle (21).

Athletes: Hand in caestus—oil jar (89).

Ostlers: Curry-comb—horse's leg (81).

Players: Dice-box—two flutes (84), head of satyr—leg of satyr (42).

Barbers: Scissors—comb (79).

⁷ Not given by Grueber.

Chiropodists: Hand with lancet—human foot (Bab. 51).⁸

Physicians: Thyrsus (?)—two-handled cup (91).

Butchers: Cow running—calf running (29), hatchet—bipennis (40).

Fishmongers: Cuttle-fish—prawn (33), octopus—four-pronged fork (78).

Farmers and shepherds: Windlass and bucket—bucket (103), windlass or pump—pitcher (104), spade—rake (61),⁹ stag's head—goat's head (84), basket—hoe or mattock (bidens) (9), bee—flower (10), head of Pan—pedum with fillet (41), borer for stakes—pedum (13).

Sailors: Prow—aplustre (72),¹⁰ trident—dolphin (95).

Soldiers: Oval shield—knife (80), round shield—parazonium (81), round shield—two bows (?) (82), curved sword—sheath (90), standard surmounted by wolf—Parthian standard (draco) (88), yoke—helmet with spike (109), saddle-cloth—spear (E.A.S.),¹¹ helmet with plumes—helmet (19), cuirass—crested helmet (30), two helmets with crest (45), helmet with spike—dagger or baton (46), phalerae—mouth-piece for horse (68), helmet with crest—human head (44), helmet with gryphon crest—harpa (43).

Officials, &c.: Augur's cap with spike and cross-bar—the same without cross-bar (5), axe—sceptre (8), curule chair—seat (32), pileus surmounted by star—the same with cross (18).

There is also a residuum of symbols of which the meanings are obscure as in several cases it is difficult to say what particular objects the symbols are intended to represent.

This list of symbols presents so close a parallel to the symbols on coins of Papius, that if our interpreta-

⁸ Not given by Grueber. Cf. Papius, symbol 47.

⁹ Described by Grueber as paddle and five-pronged fork.

¹⁰ Cf. Papius, symbol 5.

¹¹ Not given by Grueber or Babelon. Cf. Papius, symbol 92.

tion of the latter is correct, we are justified in applying the same line of reasoning to the coinage of Roscius.

Thus we may naturally expect to find the issue of L. Roscius intimately connected with some movement of the Marian party reminiscent of the outburst under L. Aemilius Lepidus.

The tabulation of finds given in vol. iii of the *B.M.C.* shows that several years must have elapsed between the coinages of Papius and Roscius, and on this evidence Mr. Mattingly places the latter between 71 and 59 B.C., probably nearer the end than the beginning of the period.¹² Mr. Grueber, following de Salis, assigns the issue to *circa* 70 B.C.,¹³ and Babelon to 64 B.C.,¹⁴ although neither gives any specific reasons for doing so.

Within the limits of the period to which the coinage of L. Roscius may be reasonably assigned two dates stand out conspicuously in the history of the trades-guilds. In 64 B.C., as we mentioned above, the guilds were suppressed by a decree of the Senate, as being dangerous to the interests of the aristocratic party. In 58 B.C. they were revived as part of the democratic programme of the tribune Clodius.

As a case may be made out for connecting the coins of Roscius with either of these dates, it is only fair to state the arguments for each respectively.

(1) The suppression of the *collegia* by the Sullan party in 64 B.C. was followed by a violent democratic reaction, headed by P. Servilius Rullus, who was elected tribune in December of the same year. His

¹² *Num. Chron.*, 1924, p. 50.

¹³ *Coins of the Rom. Rep.*, vol. i, p. 422.

¹⁴ Babelon, vol. ii, p. 401.

policy was embodied in an agrarian bill framed ostensibly for the benefit of the Roman lower classes, but in effect as a blow to the Sullan constitution. Small holdings in various parts of Italy were promised to the people, and funds for this purpose were to be raised partly by the compulsory sale of large estates in Italy and partly by the appropriation of recently acquired territory outside. This meant the undoing of Sulla's policy, and hit directly at those who held land that had been conferred by him.

Owing mainly to the opposition of Cicero the bill was not carried. Nevertheless, it indicated very clearly the democratic trend of Roman politics and was, as Mr. Heitland points out, undoubtedly backed by Caesar.¹⁵

Here, in passing, it is interesting to note that among the symbols on denarii of Roscius are a few that refer unmistakably to Egypt; namely, head-dress of Isis (G. 50),¹⁶ palm-tree and date-palm (G. 63), lotus and sistrum (G. 51), and a peculiar form of lever for raising water, commonly seen on the Nile. The fewness of these symbols makes their allusion inconspicuous, but it is there all the same. Although the bill did not expressly mention Egypt as a district to be appropriated to swell the funds of the democrats, Caesar certainly had his eye on the region of the Nile, and its annexation was one of his immediate aims. Without stressing the point unduly it certainly looks as if this covert reference to Egypt in these symbols was a Caesarean touch.

The *collegia*, aggrieved by the action of the Senate,

¹⁵ Heitland, *Roman Republic*, vol. iii, p. 84.

¹⁶ This symbol, however, occurs elsewhere on earlier issues.

naturally presented a fruitful field of support for the anti-Sullan policy of Rullus. So that a direct appeal to them on the public money may plausibly be urged as a politic stroke on the part of the socialistic tribune. On the other hand, it may be objected that even Rullus would scarcely have ventured on so flagrant an act of defiance of the Senate.

(2) P. Clodius, the tribune of 58 B.C., in a large measure carried through the democratic programme unsuccessfully attempted by Rullus six years previously. It began as usual with a corn-law, and included the remission of a trifling duty on grain and a wholesale manumission of slaves. But the point that concerns us is that Clodius, fully alive to the possibilities of support from the industrial classes, and in spite of Cicero's opposition, succeeded in reinstating the *collegia*.

Here then we find a socialistic movement accompanied by a chain of circumstances with which the coins of Roscius are thoroughly in keeping. There is no question, too, that Caesar, though absent from Rome, gave his support to Clodius and the popular party, so that the Caesarean influence, implied by references to Egypt in symbols on the coins of Roscius, is appropriate to the movement of Clodius quite as much as to that of Rullus.

On historical grounds, therefore, the weight of argument favours our connecting the coinage of L. Roscius with the revival of the *collegia* in 58 B.C. rather than with their suppression in 64 B.C.; although it must be admitted that on considerations of style and fabric the coins themselves suggest a rather earlier date.

E. A. SYDENHAM.

II.

LATE FOURTH-CENTURY CURRENCY IN BRITAIN.

THE discovery of a hoard of more than 4,400 bronze coins at Weymouth in the summer of 1928 throws considerable light on the state of the currency in Roman Britain towards the close of the fourth century. From Richborough we obtained a great mass of site finds which enabled us to decide the question of the Roman evacuation as between an early and a mid fifth-century date, to fix the closure of the Gallic mints to about A. D. 395, to assign the principal types to different groups of mints, to observe the withdrawal of the bronze mint from Trèves to Arles, and to make an interesting speculation about the predominance of Arcadius in Gaul which the proportion of his coins revealed. We were able also to attempt a study of the way in which the coinage of three colleagues was distributed among the different workshops of the mints. In addition the finds of barbarous imitations of third- and fourth-century money raised more questions than they solved.

But decisive though the Richborough evidence appeared, at all events to the writer of this paper, its clearness was obscured, especially with regard to the last two problems mentioned, by the fact that it consisted of site finds buried at various times, and not of a closed hoard.

Since the publication of the Richborough results I have been able to examine two bronze hoards of

late fourth-century date, one from Grovely Wood in Wiltshire, the other from Weymouth on the Dorset coast.¹ The Grovely Wood hoard consisted of less than a thousand pieces, but is of unique importance because it was buried along with a silver hoard of about 300 siliquae. Dr. G. F. Hill described the silver twenty years ago: the bronze had never been studied until the Rev. George Engleheart, in whose keeping it had been preserved intact, courteously placed it at my disposal. The jars which contained these two hoards were buried side by side very shortly after the elevation of Honorius to the rank of Augustus; about a score of his bronze coins appear, but the silver ends with Arcadius. The bronze hoard shows the same proportions as the Richborough finds between Arles and Trèves, and between Arcadius and Honorius, and it confirms the other conclusions drawn from Richborough.

When this point of contact with the closely datable series of silver hoards had been secured, the Weymouth Bay find was conveniently made. I am indebted to the good offices of Dr. G. F. Hill and the courtesy of Mr. A. J. Mayne, the agent of the Weymouth Bay Estate, for the opportunity of dealing with it. Mr. Mattingly also very kindly had the coins boiled in soda at the British Museum.

The hoard is of the same general composition as those from Richborough and Grovely Wood, but there are some interesting differences which suggest that while the Grovely Wood deposit was buried before

¹ A full description of this find is printed in *Proc. Dorset Nat. Hist. and Archaeol. Soc.*, 1929, pp. 158-82. The historical setting of the types is discussed in *Proc. Camb. Philol. Soc.*, 1929, pp. 7-9.

much of the Richborough money, the Weymouth Bay hoard is possibly a little later, at least on its Italian (*SALVS REIPVBLICAE*) side. The extent and superior condition of the Weymouth hoard are, however, its most valuable characters, and will help us to form an accurate idea of the money in circulation just before the end of the fourth century.

The following table shows the coins of the two principal issues and the totals of all types of the Theodosian House, at Weymouth and at Richborough.

	Salus		Victory		All Types Totals	
	W.	R.	W.	R.	W.	R.
Valentinian II . . .	109	232	137	290	263	560
Theodosius	157	235	169	302	352	615
Arcadius	159	362	785	1286	959	1709
Honorius	193	116	186	214	380	345
House of Theodosius	866	2556	818	3533	1684	6347
Totals	1484	3501	2095	5625	3638	9576

There are some very significant figures in this table. The preponderance of *Victory* over *Salus* coins is much less at Weymouth (about 4:3) than at Richborough (about 11:7). In other words the proportion of Italian coins at Weymouth is considerably larger. That is one indication of later date. Another is the much larger representation of Honorius. Although the total of Theodosian coins at Richborough is not far short of three times those from Weymouth, Honorius actually has more coins attributable to him in the latter find. That is only partly accounted for by the superior legibility of the Weymouth coins: the chief factor is

the larger proportion of Italian money and especially of the Roman mint over Aquileia. A second table will make this plain.

	<i>Aquileia.</i>			<i>Rome.</i>	
	Weym.	Richb.		Weym.	Richb.
Arcadius	45	68		27	16
Honorius	16	10		136	15*

*6 in Richb. ii, p. 112, but the unaspirated legend was not then known to be exclusively Roman. See Richb., nos. 12622 ff. note.

Arcadius had no such predominance in the mint of Rome as he had at Aquileia and in Gaul. I can imagine no other explanation of the large Roman representation of Honorius than to suppose two things, (1) that Honorius, after he was made Augustus, received a similar status in Rome to that which the coins indicate was enjoyed by Arcadius in Gaul, and (2) that the elevation of Honorius to the rank of Augustus took place at an earlier date than that commonly assigned. At Weymouth there are actually more **SALVS REIPVBLICAE** coins of Honorius than of Arcadius, and that is just the converse of the condition of things at Richborough and Grovely Wood, where it was the marked preponderance of Arcadius in both types over the younger brother, who succeeded in A.D. 395 to the throne of the West, which we held to prove that the bulk of the Richborough money was coined before that date.

An alternative to the second hypothesis might have been to suppose that Rome went on striking after 395, and that we had that money at Weymouth; but the position of Arcadius, almost entirely in the last officina, negatives this.

It may seem a surprising conclusion that the Weymouth money extends to later mintages than the mass of the Richborough coins, but it is quite likely that much of the latter consisted of hoards dispersed by the plough, and some of these may have been deposited earlier for individual reasons.

A complete table of the Gallic and Italian mint-marks on the two main types of the House of Theodosius in the Weymouth hoard is given here.

This table will give pause to those who may be inclined to put the contents of the Weymouth deposit much later than A.D. 395. I defer for the moment the question of the actual date of burial. But it may be pointed out that Honorius is most plentifully represented in the junior officinae at Rome, and that his representation in the first three officinae bears a curious resemblance to that of Arcadius in the first two of Arles. Secondly, Arcadius appears in the lowest officina at Rome, as Honorius does at Arles. The distributions of the money of the two brothers at Arles and Rome respectively are complementary to one another. Whatever was the status of Arcadius in Gaul the same status was evidently held by Honorius at Rome, and his position at the ancient seat of empire marks him out already as the destined heir of the West. Both on the Weymouth and Richborough coins Honorius is much in the minority at Aquileia, while Arcadius exceeds both his seniors and enjoys a special priority in officina I. The same picture is equally true of Lyon, except that at both sites the second officina is hardly represented. It seems as though northern Italy had become detached again from the south, and that Aquileia had reverted to the position

WEYMOUTH BAY HOARD.

MINT-MARKS.

SALVS REIPVBLICAE

VICTORIA AVGGG (single Victory)

	Aq.		ROME					ARLES			LYON		Tr.
	I	II	I	II	III	IV	V	I	II	III	I	II	
Valentinian II	13	16	14	10	1	—		47	1	1	26	1	4
	+1		+8					+14		+1			
Theodosius	18	22	3	3	10	13	—	4	57	1	18	—	10
	+3		+10					+21		+1			
Arcadius	27	12	1	—	—	3	14	73	45	99	38	1	23
	+6		+5					+92		+19			
Honorius	7	6	10	5	9	13	12	2	2	47	5	—	—
	+3		+87*					+37		+5			
House of Theodosius	8	6	34	7	16	23	24	46	29	67	32	3	32
	+8		+74					+65		+6			
Official Totals	73	62	62	25	36	52	50	172	134	215	119	5	
Grand Totals	156		409					750			156		69

* Fifty-three of these have been assigned to Rome by the legend D N ONORIVS P F AVG, and eight by the short legend, D N HONORI AVG.

of provincial capital of a Cisalpine Gaul such as it occupied in the time of Julius Caesar. Certainly the primacy of Arcadius is the same there as in Gaul.

But it is the distribution in the mints of Rome and Arles which is most significant for dating the find. At Rome Valentinian II is almost confined to the first two officinae, Theodosius to the third and fourth, Arcadius to the fifth. Honorius is universal, but especially strong in the last two officinae and predominant in total. At Arles Valentinian, Theodosius, and this time Honorius, are almost confined to officinae I, II, and III respectively, while here it is Arcadius who is predominant and universal, but especially strong in the last officina. Such a distribution could not have remained true for long after the death of Valentinian II. The lines of this picture are more sharply drawn at Weymouth than at Richborough, but it is substantially true of both, and the closed hoard is naturally clearer than the site finds. Incidentally we have it clearly established that at Rome and Arles the officinae were assigned to three colleagues in order of seniority. In the secondary mints of Aquileia and Lyon the same practice was not followed, and the problem of dividing three into two was solved by a comparative equality. But both arrangements were overlaid by the peculiar status of the junior Augusti in Gaul and Italy respectively, Aquileia being for this purpose classed with Gaul. So far as the more slender contents of the Grovely Wood hoard enable us to go the story they tell is virtually identical.

Having secured an approximate latest date for the mintage of the Weymouth coins we can now consider

the date of deposit. Their superior condition, comparatively speaking, indicates that they were not very long in circulation. In particular I think much of the Italian money arrived in bulk. Although the find was subjected to a good deal of shuffling in gathering, washing, and sorting, it was noticeable that similar coins often occurred in groups. Among them, for instance, were no less than eleven with the obverse legend ending *RI AVG*, that is, Honorius in the genitive.² They are all *Salus* coins from Rome, five marks of which are legible. Four of these occurred in the course of examining thirty coins. But the expectation that the good condition of the coins would lead to a corresponding large increase in the readings of emperors and mints was disappointed by the singular parsimony of metal in the flans. The reduction in size of the contemporary silver and the regular clipping of *siliquae* is familiar. But a very large part of the bronze also is struck on flans too small to take the dies. That is particularly the case with the Roman mint. The obverse legend left of the head is more often missing than not, and if one side of the impression is complete in this respect the other is usually curtailed. Absolute adequacy of the Theodosian flans is very rare except in the earliest issues, for even when the piece is otherwise entire the dotted border of the dies seldom appears on the coins, although occasional misstrikes on which the edge of the design crosses the middle of the disk always show it. In fact, the engravers must have gone on carefully reproducing on the dies a feature which was very seldom transferred to the flans.

² Two have the complete legend *D N HONORI AVG*.

If the contents of the Weymouth hoard be regarded as a typical sample of the bronze money in circulation about A. D. 395, the coinage of the Theodosian emperors, together with some eighty odd coins of Magnus, Victor, and Eugenius, constitutes by far the greater part. Pre-Theodosian money amounts to less than one-ninth of the whole, but it is distributed over a long period in an interrupted fashion characteristic of late finds, and the light thrown on its composition by a large closed hoard is, I think, one of the most valuable contributions of the Weymouth find to the study of late fourth-century currency. First of all there are about thirty radiate coins of the third-century Gallic empire and Claudius Gothicus. Then succeeds a great gap unrepresented by a single piece, until the series begins again with Helena and Theodora, Constantinopolis and Urbs Roma, the money of the sons of Constantine, and the House of Valentinian I.

Radiate Coins.

Of the vast quantity of debased *Antoniniani* issued under the Gallic usurpers Postumus, Victorinus, and Tetricus between A. D. 258 and 273, many remained in circulation, along with a number of semi-barbarous imitations, of which some, and I think, for reasons I shall give presently, all were contemporary with their originals. Of all these the smaller modules appear to have passed current together with the Theodosian bronze which they exceeded little if at all in size. Sometimes a larger radiate coin, perhaps first broken by accident, is trimmed down to 4 Æ size. This trimming of earlier coins is amply attested in the hoard. Often the radiates have the oval flans speci-

ally characteristic of the two consecration series of Claudius Gothicus.

That the barbarous Tetricus money of the kind found at Weymouth and in other closed fourth-century hoards is contemporary with the types it copies is amply proved by its occurrence in hoards buried in the third century. A small find of 56 pieces from Segontium closing under Claudius II, with two outliers of Carausius,³ contained 14 unclassified radiates described as *minimi*. The term no doubt merely refers to their greatly reduced flans, and does not class them with the true *minimi* referred to below. The Jublains hoard of 4,493 pieces, mostly of the Tetrici, and closing with eight coins of Aurelian (*Num. Chron.*, 1881, p. 27), is also stated to have contained *minimi*. But Sir John Evans (*ibid.*, Proc., p. 20) truly observes: "The view of M. Hucher and Mr. Roach Smith, that the minute and illegible coins commonly called *minimi* belong to the time of the Tetrici, can only be partially true, as many, if not most, of these small pieces are imitations of the late Constantine period. The barbarous coins which are evidently imitations of those of Tetricus, and which from the Jublains hoard are proved to be contemporaneous with them, are, I think, usually of larger module than the *minimi* properly so-called." If we make the reservation that there are radiates as well as Constantinian types which are true *minimi*, the above statement holds good. A hoard of 2,308 pieces found near Cambridge (*Num. Chron.*, 1889, pp. 332 ff.), chiefly of the Gallic usurpers and ending with three of Aurelian, contained barbarous imitations

³ R. E. M. Wheeler in *Arch. Cambr.*, 1922, pp. 317 ff.

of the Tetrici. Some "are of rude execution, the lettering also is much blundered". In the Blackmoor hoard (*Num. Chron.*, 1877, pp. 90 ff.) 29,802 in number, 14,028 being of the Tetrici, the coins of Tetricus include types with blundered spelling, barbarous lettering, and ω thus on its side (cp. R II 3799 ff., 3955).

The Gap in the Series.

The complete absence from the hoard of the larger *Antoniniani* of the Gallic empire, and the larger bronze of the whole period from the Tetrarchy to the end of Constantine I, is due to the tendency to homogeneous denomination in all hoards. The bigger pieces were no doubt melted down and recoinced into the current Theodosian money.

Constantinian Coins.

The principal Constantinian series, *Constantinopolis*, *Urbs Roma*, *Gloria Exercitus*, and *Fel. Temp. Reparatio* (Legionary spearing horseman) suffered a progressive degradation in size, associated notably in the *Urbs Roma* coinage with the mint of Lugdunum (see Richb. II, 5796-887) and in the case of the *Gloria Exercitus* series with the passage from the predominantly large two-standard type to the reduced single-standard module. The latter is the sole type represented at Weymouth under Constantius and Constans. It is with very few exceptions the smallest modules of these issues which are preserved at Weymouth, as in other Theodosian hoards. The very occasional larger piece is simply due to the fact that a single coin was not worth recoincing separately. Large coins in bulk

were no doubt so treated, stray examples continued to pass.

The coins of Helena and Theodora, and the *Spes Reipublicae* type of Constantius and Constans, were struck small from the first, and therefore circulated freely in the Theodosian age.

The House of Valentinian I.

The larger issues of Valentinian I, Valens, and Gratian are similarly excluded. It is well known that their two main "bronze" series, bearing the legends **GLORIA ROMANORVM** and **SECVRITAS REIPVBLICAE**, range from a large to a small size. With few exceptions only the small degraded modules are included in the Weymouth find. One larger coin was broken and appears in the hoard trimmed, like the radiates before mentioned, to small 4 Æ module.

It is difficult to believe that the larger Valentinian coins of these types continued to circulate as a higher denomination side by side with the Theodosian money, for the small coins preserved are the lower grades of a progressive decline of the same types; there is no line of demarcation between the sizes, such as the wholly artificial one which Cohen tries to make in the Constantinian series for the purpose of representing their range in catalogue form (v. s. Richb. II, 5381-529; 5796-887).

The law by which a debased coinage drives its superior predecessors to the melting-pot operates as clearly, though for obvious reasons not so exhaustively, in bronze as in gold and silver. The total number of radiates in the Weymouth hoard is not very large,

but it represents a considerable quantity of these coins still in circulation in the Theodosian age. The great unrepresented void of the intervening century does not support the view that they are later imitations. They are here for the same reason that Mark Antony's silver is found in third-century hoards.

We have thus a unifying principle, so simple as to seem obvious as soon as stated, which explains both what is absent from and what is present in the contents of late hoards. Observing the uniform operation of this tendency, I find it impossible to believe that barbarous imitations were being struck in the fifth century in larger module than the common currency. I cannot therefore accept any longer even an early fifth-century date for the copies and re-strikes of late Constantinian money which constitute the group of Carausius II coins. Attributions to Censorius or Genseric, or other fifth-century names, however plausible and ingenious, cannot, I think, be entertained.⁴ The Grovely Wood hoard, none of which could have been minted after about A.D. 394, contained a **FEL TEMP REPARATIO** type, overstruck transversely on a **GLORIA EXERCITVS** coin. It is far more probable that the coins belong to those chaotic years at the close of the Constantine era when the jealousy of Constantius II invited the barbarians to overrun the frontiers of his western colleagues.

⁴ Mr. Alfred Anscombe's attribution to the Count Censorius who was killed in A.D. 448 (*Brit. Num. Journ.*, vol. xix) leaves me entirely unrepentant. It is impossible to reply in a note. There is no hint in the contemporary annalist that Censorius was ever *Caesar*. He is regularly described as *Comes*.

Fifth-century Coins.

We have found, then, no barbarous copies which are not more or less close in date to their originals. But the radiates in the Weymouth hoard provide an explanation of that extraordinary series of barbarous imitations discovered at Richborough (Richb. II, Plate xxxvi) to which the contents of a closed hoard of Theodosian date such as this exhibit no parallel. These later copies differ from those made in the third century, not so much in degree as in the whole character of their art. If it be objected as incredible that fifth-century imitations should leap a gap of a century and a half to copy the least reputable coinage of the third, the answer is that in intention they did nothing of the kind; they simply copied money they found still in circulation at the time.

The same cause accounts for the imitation of both third- and fourth-century types on the true minims which also we must assign to the fifth century. They occur at Richborough, but are absent from the Weymouth find. Yet the coinage has already reached almost the limit of degradation. Take one of those magnificent yellow brass sesterii of Trajan and set beside it a product of the mint of Honorius at Rome: they almost seem as if they might have been designed on purpose to illustrate the title-page and tail-piece of a *Decline and Fall* of the Empire in the West.

F. S. SALISBURY.

III

THE MINT OF BERWICK-ON-TWEED UNDER EDWARD I, II, AND III.

[PLATES I-II.]

THE history of Berwick during the late thirteenth and fourteenth centuries was eventful, and as it bears directly on the coinage it will be as well to give a summary of it. A convenient starting-point for the purpose of this paper is the year 1296, in which Edward I undertook his invasion of Scotland. In the course of this Berwick was besieged, taken, and sacked in a very thorough manner. No doubt this was done in an endeavour to terrorize other towns into peaceful surrender. The invasion was only temporarily successful, and a year later, September 1297, the battle of Stirling Bridge led to the complete defeat of the English and the reoccupation of the town of Berwick by the Scots. It is noteworthy in connexion with this occupation that, while the Scots held the town, they were unable to dislodge the English from the castle. After a winter of what must have been a state of semi-siege, a relieving English army appeared in the spring. Wind of their approach must have reached the Scottish troops, for before their arrival they quietly evacuated the town, leaving it to receive the English army with open gates.

From 1298 to 1318 the English were in uninterrupted occupation of Berwick. In 1318 an attack was made on the town by Randolph and Douglas, and the Scots

once more regained possession and held it till 1333, when the English took it again after the battle of Halidon Hill. From that date they continued to hold it till the end of Edward III's reign, save for one short break in 1355, when once again the town was occupied by Scottish troops while the English troops retained the castle.

Thus for numismatic purposes we get two main periods:

(1) 1296-1318,

(2) 1333-1377,

the first being liable to show some signs of the interruption from September 1297 to spring 1298.

It may be noted in passing that Edward I was in Berwick in 1291-2, when he was called in as arbitrator in connexion with the dispute about the Scottish succession. On this occasion he would hardly have been in a position to open his own mint there.

Before proceeding to the coins themselves one point must be mentioned about which it appears two opinions exist, namely, whether all the coins struck at Berwick and bearing the name of Edward were actually struck under his authority, or whether some were struck during the Scottish occupation of the town. On the face of it, it would seem obvious that all coins with Edward's name on them would be struck by him, and that if any coins were struck by the Scots they would bear the name of John Baliol or Robert Bruce, and, as most of these have no mint-names, would be indistinguishable from those struck at Edinburgh.

To this view there are two objections. In the first place, early in the series come a group of coins which are so uncouth as almost to preclude the idea that

they were struck under official auspices [Pl. I. 5-9]. In the second place, at the end of the series come the very rare bear's-head pennies [Pl. II. 12], struck in the reign of Edward III. They can hardly have been struck after 1335, when halfpence and farthings of reduced standard were the only coins issued. After 1331 London and Canterbury ceased to strike pennies for some time, owing, it is presumed, to lack of bullion, and, if Berwick was in the same plight as the other mints, it must follow that these pence were struck in or before 1331, that is, when the town was in the hands of the Scots. The presence, moreover, of the bear's head on the reverse in place of the pellets in one quarter is most unusual in coins of a royal mint; in fact it appears to be without precedent to insert a distinctive mark of this kind, if we except the single pellet in place of the customary three on the halfpence of Newcastle in Edward I's reign. These then briefly are the reasons put forward in favour of coins having been struck by the Scots at Berwick bearing the name of Edward.

In the case of the uncouth coins mentioned above, it is significant that they are found muled with coins of good Berwick workmanship, and must therefore have been struck by some party having access to the official dies. Moreover, these coins fit in suitably with that curious occupation of the town by the Scottish troops in 1297-8, and I should like to regard them somewhat in the nature of siege-pieces struck to pay the troops. That there were difficulties in getting money is shown by an account of a mutiny among the troops in 1301 owing to no money having arrived for wages.

The arguments in connexion with the bear's-head pence are more elaborate, but it is important to bear in mind the date at which the lowering of the standard took place, namely, 1335. This was two years after Berwick had been recaptured by the English. The bear's-head pennies, moreover, cannot be far removed from the halfpence and farthings with the same mark, and these can be shown from the records to have been struck in the years 1335-6 and later.

Now if the bear's-head pennies were not struck by Edward they must have been struck either by an unofficial or by an authorized Scottish moneyer. In either case, since the intention must have been for them to pass as coins of the English king, it is curious that any one should have gone out of his way to place on them a mark which must inevitably differentiate them from Edward's coins, even to an illiterate person. Moreover, if the moneyer were an official one, it is difficult to imagine his striking coins with the name of Edward. Scotland at this time felt its individuality and nationality threatened by England, and such an action as this would be in direct opposition to the feeling of the nation as a whole. It is impossible to visualize it as being officially authorized.

We are therefore forced back to our original theory that these coins were struck by Edward III. One point remains unsettled. The date, if we accept this view, must be 1333-5, but during this time the English mints were not striking pence. To deduce from this that Berwick too would not be striking is very dangerous, for, while the English mints sometimes do have features in common with Berwick, it cannot be too strongly emphasized that Berwick was,

as Burns says, a semi-Scottish mint, and was independent of control from the mint at London. As a merchant-town trading with the Continent, it might well have bullion at a time when there was none available in London.

I have been unable to trace any specific order for the establishment of a mint in Berwick in 1296, but the following entry occurs:¹

"And because the king wishes that the same order, in all things, should obtain as well in the said Exchequer in Berwick, as in that at Westminster, he orders that the Barons should carefully examine the schedule enclosed, and those things necessary for its establishment will be sent as soon as possible, in order that they may have, in those things, the same order in the said Exchequer at Berwick as is observed in the aforesaid Exchequer at Westminster."

Without the substantiating evidence of the coins we could hardly regard this as an order for the establishment of a mint. A type exists, however, which I have called Class IV, which can be shown with a fair degree of certainty to have been struck from about 1300 to 1310, and behind this come, linked by a chain of mules, a number of different types, types in some cases so different that it is difficult to think that they can have been struck within a shorter period than four years.

A recently discovered hoard, however, has upset my calculations on this point. The hoard was found at Newminster in Northumberland, not very far from

¹ Stevenson's Documents, August 22, 1296. Scott's *History of Berwick*, p. 28.

Berwick (for details see *Num. Chron.*, 1927, pp. 277-9). It contains coins up to Fox type X e, and so could not have been buried earlier than, say, 1305. There are 428 coins of English mints, but none of Berwick. This seems to point very plainly to Berwick not having been operative up to that date.

But there is another hoard, found at Lochmaben (*Num. Chron.*, 1905, pp. 63-82), which contains coins of Bishop Beaumont, who only became Bishop of Durham in 1318. This hoard was probably deposited about 1320. It contained 422 English pennies, was also buried not far from Berwick, and yet contained only seven coins of that mint. Now the records show that a mint had been working there for some time. Several officers are mentioned between 1311 and 1315, and the actual accounts exist for 1311/12, showing a profit of £19 18s. 0d. (This on a basis of 4d. a lb. profit means a production of some 1,200 lb. for the year.) I do not therefore feel inclined to base my opinion solely on the Newminster hoard and to say that no coins were struck at Berwick till after 1305.

Any one who has made even a cursory study of the coins of the first three Edwards must have been constantly puzzled in his attributions by the fact that Berwick coins always seemed to differ from those of the other mints, which struck a type common to all of them. As a matter of fact there is one type of Berwick, the first of Edward II, which is in all respects similar to those struck at London, Canterbury, and elsewhere, but apart from this all the coins of Berwick are independent of London. This can be accounted for by the peculiar position of Berwick. It represented the nucleus of Edward's new kingdom of Scotland,

and was accordingly under separate jurisdiction just as were Edward's French dominions. Scott, who has written the standard history of the town, says:

"Nothing is more certain than that the town of Berwick, during these early times, and consequently during its future history, was governed according to the laws of Scotland."

Burns also suggests that Berwick may have been regarded as a semi-Scottish mint, and would so have been independent of London.

As proof of this theory of independence the town is found at a slightly later date possessed of a full staff, which included a Lord Chancellor and a Lord Chamberlain.

All these points serve to emphasize Berwick's peculiar position as a mint and to account for the apparent irregularity of its coinage. It was, in fact, the one mint in Great Britain under Edward's jurisdiction to make its own punches and dies instead of having them supplied from London as did the other mints.

I have alluded to the lack of records of the mint in the early years of its supposed existence. This is not altogether surprising, for the Rolls of the Exchequer of Berwick prior to 1327 have been lost. Those of Edward III's reign, though incomplete, do exist, and furnish most valuable information as to the profit of the mint in each year, this item being included among the receipts of the Chamberlain.

EDWARD I.

Now to come to the coins themselves. One or two curious features will be seen on many pieces. For instance, the letter E on the reverse is ordinarily

a Roman letter, whereas on the obverse it is always Gothic. The letter **N** is always Roman in **ANGLIE**, but in one or two issues is Gothic in **DOMINVS**. The spelling of Ireland, **hVD** instead of the usual **hVB**, which occurs on one type, is apparently just a copying error, for it is very soon corrected, but the other points appear to be privy marks.

It is curious that Burns who, in his standard work on the coinage of Scotland, devotes a chapter to the English coins of the first three Edwards, should make but passing mention of the semi-Scottish mint of Berwick. He states that a mint must have been established there soon after 1296, as coins are found with a trifoliate fleur-de-lis on the side of the crown and also the open **E** and the reading **EDW** for the king's name.

I. The coins to which he refers remind one of the earlier issues of Edward I (Fox III and IV), which would be the commonest new coins in circulation at the time and from which they were no doubt imitated. The obverse reading is the same, **EDWRANGLDNShVB**, and the reverse is **VILLTBEREVVICI**. A variety I b exists, reading **hVD** for **hVB** [Pl. I. 1].

In a mule of this variety (described below), of which the true coin has not appeared, the king's name is abbreviated to **ED** [Pl. I. 4]. The obverse is in other respects similar to I b. This reading is most unusual; in fact it only occurs elsewhere on the London pennies struck in 1279 (Fox I b), which may have been patterns.

Both types I a and I b are found muled with the next group (II), which consists of three types of very coarse coins. They give the impression of having been made by an untrained moneyer who imitated as best he could the previous issues.

II a. These read **EDW** or **EDW** (with closed **E**) and occasionally **hVB**. The crown is found both trifoliate [Pl. I. 5], rare, and bifoliate [Pl. I. 6], fairly plentiful. On the reverse also the **E** is closed and the usual reading is **BERREWYCI**.

II b. These read **EDW**, have the bifoliate crown and sometimes pellet stops in the legend [Pl. I. 7]. Halfpence are found of this variety, though they are of considerable rarity [Pl. I. 8].

II c. Lettering not unlike the last but they read **EDW** and have a large pellet on the breast. The whole appearance is very gross, and were the coins not of good silver and weight, one would be tempted at first glance to call them forgeries [Pl. I. 9].

All coins of type II have the closed **E** throughout and are so easily recognizable that a detailed description would be superfluous.

These are the coins that I suggest may have been struck in the winter of 1297/8, when the castle was in a state of semi-siege and money might have been needed to pay the troops.

They should prove to be after and not before type I, for the dies are so coarse compared with type I that no moneyer who was trying to improve the coinage would be likely to use them in conjunction with his finer dies, whereas an inferior moneyer would seize the opportunity of using any old dies on which he could lay his hands.

The mules referred to above are as follows:

Obverse I a = Reverse II a [Pl. I. 2].

„ I a = „ II b [Pl. I. 3],

„ I b = „ II a [Pl. I. 5].

III a. On the recapture of the town by Edward's

troops in the spring of 1298 the coinage once again becomes comparatively orderly. The trifoliate crown is re-established, together with the Roman **E** on the reverse, and this latter feature continues till the introduction of the "London type" (V). The coins, however, now begin to read **EDWƿ**, and a new feature introduced is a Gothic **ƿ** in **DNS**. Some read **WILLƿ** for **VILLƿ** on the reverse [Pl. I. 10]. Of this type halfpence exist. Hawkins illustrates one, but misreads **hI** for **hB** on the obverse. I have another from the same die where the reading **DNS hB** is quite clear [Pl. I. 11]. A farthing in the Montagu sale, said to read **EDWƿ . R. ƿRGL . DNS . hB** and **VILLƿ BEREWICI**, which I have not been able to trace, would probably belong here, though I suspect that the "**ƿ**" in **ƿRGL** should be "**N**" and that in **DNS** "**ƿ**".

III b. Closely connected with the last by the similarity of the lettering, the trifoliate crown, and the reading **EDWƿ**, comes a group which have **DNS** with the Roman **N** [Pl. I. 12]. Halfpence are found [Pl. I. 13], and are less scarce than those of the other types, while the farthing (from the Wheeler sale, lot 221), which is presumably unique, is now in the British Museum [Pl. I. 16]. This type is important inasmuch as it forms the connecting link with the very plentiful coins which have the pellet on the breast. All denominations have the same reading on both sides.

There exists also a halfpenny which appears to belong here [Pl. I. 14]. It has a different bust from the other halfpence and the neck is longer. Moreover, it has the addition of an object on the breast which may be a star or a pellet, but which, on the only

specimen I have seen, is not sufficiently clear to enable me to say with certainty. If it were a pellet it would connect with the next group, though, judging from the lettering (which is discussed later), it could not belong to that group.

Another coin of which the position is somewhat uncertain is the farthing from the Wheeler collection, lot 214, now in the British Museum [Pl. I. 15]. This reads **ED(WTRDVS) REX** and may belong here, though from its style it would appear more probable that it belongs to type I.

A word must now be said about the lettering. With the exception of the coarse coins in type II, the letter **V** has up to this time been formed of two wedge-shaped pieces **∨**, the **W** being the same duplicated. In the next type, IV, the **V** is of a new form **∇**, that is, one plain wedge-shaped piece and one with a marked serif. The **W** becomes **∞**. These letters are useful, as one or the other occurs on each side of the coin and so is a guide in identifying mules.

Of type III b one or two coins exist muled with IV, that is to say, having the wedge-shaped **W** on the obverse and the serified **V** on the reverse [Pl. II. 1]. Another point of connexion between groups III and IV is the recurrence on IV a and b of the Gothic **R** in **DRS** which is found on III a. In view of this dual connexion it may well be that III a and III b were being issued concurrently.

IV. This very plentiful variety, characterized by the pellet on the breast, can be divided into three sections:

- (a) With trifoliate lys to crown and reading **DRS**
[Pl. II. 2].

- (b) With bifoliate lys to crown and reading DNS
[Pl. II. 3].
- (c) With bifoliate lys to crown and reading DNS
[Pl. II. 4].

What I take to be the very earliest varieties of class (a) omit the distinguishing mark of the group, a pellet on the breast.

Besides the considerations mentioned above the position of this group is assured by the following facts. In the first place the number of coins is far greater than that of any other group, and in the second the presence of the pellet on the breast makes one think it was copied from the London coins (Fox IX) which have the star on the breast. It will be remembered that in 1300 a great re-coinage took place, and that to assist in this many provincial mints were reopened. These coins are Berwick's contribution to the re-coinage. The change, moreover, from the trifoliate to the bifoliate lys at the side of the crown corresponds with a change that took place on the English coinage at this time, the new form being first found on Fox type X.

EDWARD II.

With the reign of Edward II the first piece of documentary evidence comes to light. Mention is made in the records of the following officers of the mint:

1311-12. Roger de Goswyk.²

² *Calendar of Documents relating to Scotland*, vol. iii, pp. 405 and 433.

1312. Roger de Walkington (deceased).³

1312 and 1315. Nicholas de Acton.³

1315 (Sept. 16?). Ralph de Sutton.⁴

For the year 1311-12 the profits are returned at £19 18s. 0d. (this at the rate of 4d. a pound, a rate that is mentioned in later records, means a production of some 1,200 pounds).

V. The first coins that can be ascribed to Edward II are easily identified and dated, as, for the first and last time, they correspond with the issues of the English mints. They are of Fox type XIa, the feature of which is the broken ornament of the crown, and they were no doubt struck in the winter of 1310 which Edward II spent in Berwick.

Type V is found muled with type IV in two coins in the museum at Edinburgh [Pl. II. 5]. This helps to assure the position of type IV.

Of type V both pence and halfpence are found, the latter being rare. The pence read both **EDWƆ** [Pl. II. 6] and **EDWƆR**, and are easily recognized by the broken spear-head on the dexter side of the crown, which is the characteristic mark of this type at the other mints. The halfpence read **EDWƆRDVS REX ƆM** [Pl. II. 7], and both denominations have a colon before **:VILLV** on the reverse. The pence occasionally have pellet stops, and one of them, in the British Museum, is muled with a reverse of crude work of which I have been unable to find the true coin.

It is known that the provincial mints had their dies supplied from London or, in the case of one or

³ Patent Rolls, Nov. 10, 1312, and June 12, 1315.

⁴ *Idem* [Sept. 16], 1315.

two northern mints, from York, and on discovering this type one was naturally led to believe that the same thing had occurred here. The coin described below, of which I have seen three specimens, proves that this was not the case, but that the punches for the dies and not the dies themselves were sent from London. The following is a description of the penny in question [Pl. II. 8]:

Obv. The lettering is of the normal London type (type V). The bust, however, is extremely crude and obviously of local manufacture. A marked feature about it is the king's squint. This die is thus composite.

Rev. Exactly in accordance with group V.

This coin can only be accounted for if we assume that the dies of this London type were assembled in Berwick by workmen brought by Edward. This would account for the normal English type suddenly occurring at Berwick. On his departure Edward must have left the punches behind. For some reason a new bust was needed, and this was made by a local workman who used it in conjunction with the punches already in his possession.

VI. Another scarce and interesting variety follows. It is a local copy, letter for letter, of the English type. It reads **EDWTRR**, a reading only found here and on some coins of type V, and has the two pellets before **VILLIT** on the reverse. It also has the squint mentioned in connexion with the composite coin, and its position in the series seems assured [Pl. II. 9].

VII. After this the coinage depreciates somewhat rapidly. A series of very crude coins is found. They mostly differ slightly from each other, but can be

linked up by the squint which occurs on many and by a curious E punch which has a rough pellet at the end of the central bar [Pl. II. 10-11]. These coins are fairly easily recognizable, but do not appear to warrant a very detailed classification. One in my collection has the mint-name so confused as to be entirely incomprehensible. It has *M* (reverse-barred) and as it is of good silver I should hesitate to call it a forgery.

In 1318 Berwick was captured by the Scots and was held by them until 1333 when, in July, Edward III took the town.

EDWARD III.

The following entry shows that Edward III lost no time in opening a mint there. John de Bourdon, Chamberlain of Berwick, in giving his account from Michaelmas 1333 to June 24, 1334, includes among his receipts: ⁵

"From the moneyers for licence to coin money in Berwick 13^s 4^d."

Later records show that in 1335 the profit amounted to £1.⁶ Thomas de Burgh, Chamberlain of Berwick, in his account covering the period Oct. 15, 1335, to Michaelmas 1336, includes this item: ⁷

"22^s 2³/₄^d received from a moneyer making halfpence and farthings in the said vill, to wit, for every pound 4^d."

In 1337 the profits only amounted to 3s. 1d. and were calculated at 3d. for every pound. The entry concludes:

⁵ Scott's *History of Berwick*, p. 250.

⁶ *Idem*, p. 234.

⁷ Record Office: Ministers' accounts, Series I, Bundle 951/1.

"And no more this year for the moneyer died 20th February." ⁸

Another moneyer appears to have been found, for in the account of Robert de Emeldon, Chamberlain of Berwick, from July 29, 1341, to October 2, 1342, there is the following entry: ⁹

"7^s 6^d received from a moneyer making halfpence and farthings at Berwick, to wit upon £22-10-0 struck and minted in the port of the vill of Berwick into halfpence and farthings to wit for every li 4^d."

The accounts of the Chamberlains of Berwick, as preserved in the Record Office, are incomplete, and contain no further entries relating to the profits of the mint, but among the subsidiary documents ¹⁰ is an indenture made at Berwick January 26, 1353, between Master John de Bolton, Chancellor and Chamberlain of the vill of Berwick, and Roger de Bromley, Clerk, deputy of Sir William de Emeldon, late Chancellor and Chamberlain, being a receipt by the former of the things pertaining to the office. These include the Chancellor's silver seal, two brass seals of the Chamberlain, and eighteen dies for stamping halfpence and farthings.

No other mentions of the mint occur, but it may be useful to note what further accounts are extant at the Record Office:

Ministers' accounts, Series I, Bundle 951. Accounts of the Chamberlain of Berwick:

⁸ Scott's *History of Berwick*, p. 234.

⁹ Record Office: Ministers' accounts, Series I, Bundle 951/2.

¹⁰ Record Office: Documents subsidiary to accounts of the Chancellor and Chamberlain of Berwick, 24-26 Edw. III, 1265/2.

- 951/3. Account of the Chamberlain, 31? Edw. III.
Imperfect, in bad condition. It contains (as far
as here preserved) no entry re the mint.
- 951/4. 37/38 Edw. III. The receipts are all here and
do not include any receipts from the mint.
- 951/5. Particulars of the account of John de Bolton,
Chamberlain of Berwick, Aug. 3, 43 Edw. III to
Aug. 3, 44 Edw. III. There are no entries for
any mint accounts.
- 951/6. Similar "particulars". 44/45 Edw. III. Again
no reference to a mint.
- 951/7. Similar "particulars". 47/48 Edw. III. Nil.
- 951/8. " " 48/49 Edw. III. Nil.

From the above entries of 1333 onwards two things appear: (i) that the coinage was on a very small scale; (ii) that part at any rate of it should consist of halfpence and farthings only. Now the impracticability of striking pence after 1335 has been discussed, and it is therefore interesting to note that the entry for 1333-4 is only the payment of the licence for coinage, but it implies that coinage followed. I have unfortunately been unable to find the exact wording of the entry accounting for the £1 in 1335, but it is in these years 1333-5 that I believe the bear's-head pennies to have been struck.

No elaborate arguments will be necessary to show that the halfpence and farthings referred to must be the double-bear's-head coins which are well known and of which no penny exists.

The bear's head placed in one or two quarters of the reverse, instead of the usual three pellets, refers

to the arms of the town, which at this time were: a bear standing close to the trunk of a tree in luxuriant foliage. The present elaborate coat of arms was only adopted in 1422.

VIII a. The pence [Pl. II. 12] have the bear's head in one quarter only and have a curious reading **EDWR $\overline{\text{A}}$ DVS $\overline{\text{A}}$ N $\overline{\text{G}}$ L $\overline{\text{H}}$ IB**. Of the three specimens known two are from the same dies, while the third is from a different pair. The last has the same obverse reading, but the cross-bar of the **N** is reversed (**И**). On the reverse the bear's head is found in one case in the **VII** quarter, in the other in the **ICI** quarter.

The halfpence with one bear's head are also of great rarity, and present several readings [Pl. II. 13]. One reading **EDW $\overline{\text{A}}$ RDVS · $\overline{\text{A}}$ N $\overline{\text{G}}$. . . D ·** is rather more closely connected than the rest with the penny, though in the case of the halfpenny the **R** is Gothic.

No farthings are known of this issue.

VIII b. These consist only of halfpence and farthings, and have the bear's head in two quarters of the reverse. The halfpence, while still rare, are more plentiful than those of the previous issue, while of the farthings only three specimens appear to be known. All the coins of this type that I have seen embody some form of the words **DEI GR $\overline{\text{A}}$ TI $\overline{\text{A}}$** . A certain number are recorded reading **REX $\overline{\text{A}}$ N**, but those so described that I have had the opportunity to examine are badly struck pieces that have been misread, and in reality read **DEI GR $\overline{\text{A}}$** . or **DEI GR'** [Pl. II. 14-15].

The list of coins appended to this paper lays no claim to being complete, but is included as an aid to classification. It contains all the varieties that I have met which appear to have any special significance.

In conclusion, I should like to express my very sincere thanks to Dr. Brooke for his help and advice in preparing this paper, and to Mr. Lawrence, who for a considerable time lent me his entire collection of coins of Berwick, thus making this paper possible.

CHRISTOPHER E. BLUNT.

LIST OF COINS.

Cr. 2 and Cr. 3 indicate that the side lis on the crown show two and three petals respectively.

All coins are pennies unless otherwise stated.

The references to collections are as follows:

B.M. British Museum.

Edin. National Museum of Antiquities, Edinburgh.

L.A.L. L. A. Lawrence, Esq.

F.A.W. F. A. Walters, Esq.

J.S.F. J. Shirley-Fox, Esq.

C.E.B. C. E. Blunt, Esq.

EDWARD I.

I a. Cr. 3.	EDWRKNGLDNSHYB	VILL KBE REV VICI.	[Pl. I. 1.]
I b. "	_____D	_____	
<i>Mules.</i>			
I a = II a. Cr. 3.	EDWRKNGLDNSHYB	VILL KBE RRE WYCI.	[Pl. I. 2.] C.E.B.
I a = II b. "	_____	VILL KBE RRE VICI.	[Pl. I. 3.] L.A.L.
I b = II a. "	EDRKNGLDNSHYD	VILL KBE RRE WYCI.	[Pl. I. 4.] C.E.B.
II a. Cr. 3.	EDWRKNGLDNSHYB	VILL KBE RRE WYCI	
"	EDWTR	VILL KBE RRE WYCI	
"	_____	VILL KBE RRE VICI.	[Pl. I. 5.]

II a. Cr. 2.	GDWRRTKNGLDNSHYB	VILL TBE RRE VYCI.	[Pl. I. 6.]
"	_____	VILL TBE REV ICI.	
"	_____a	VILL TBE RRE VYCI	
"	GDWTRKNGLDNSHYB.	VILL TBE RRE WYCI.	
II b. Cr. 2.	GDWRRTKNGLDNSHYB	VILL T. BE RAW ICI.	[Pl. I. 7.]
"	_____:	VILL TBE REV VICI	(pellet stops)
"	GDWRRTKGL. DNS. hYB.	VILL TBE RW ICI	
"	GDWRRTKNGLDNSHYB	VILL TBE RAW ICI	[Pl. I. 8.]
$\frac{1}{2}d.$ "	(m.m. ? star)		C.E.B.
II c. Cr. 2.	GDWTRKNGLDNSHYB.	VILL TBE RAW ICI	
"	Pellet on breast.	VILL TBE REV VICI.	[Pl. I. 9.]
"	Pellet on breast.		
III a. Cr. 3.	GDWTRKNGLDNSHYB	WIL LTB ERE VICI	[Pl. I. 10.]
"	_____	or WICI	
"	_____	VILL TBE REV VICI.	

$\frac{1}{2}d.$ "	EDWTRRNGLDNShVB	_____	[Pl. I. 11.] C.E.B.
"	_____	VII LTB ERE WIC	B.M.
III b.	EDWTRRNGLDNShVB.	VIII TBE REV VICI.	[Pl. I. 12.]
$\frac{1}{2}d.$ "	_____	_____	[Pl. I. 13.]
"	Star (?) on breast.	_____	[Pl. I. 14.] C.E.B.
$\frac{1}{4}d.$ "	_____	_____	[Pl. I. 16.] B.M.
"	ED REX	VII . . . ERV VICI	[Pl. I. 15.] B.M.
<i>Mule.</i> III b = IV. Cr. 3.	EDWTRRNGLDNShVB (early W)	VIII TBE REV VICI (late V)	[Pl. II. 1.] L.A.L.
IV a. Cr. 3.	EDWTRRNGLDNShVB. With and (occasionally) without pellet on breast.	_____	[Pl. II. 2.]
IV b. Cr. 2.	With pellet on breast.	_____	[Pl. II. 3.]
IV c. "	EDWTRRNGLDNShVB With pellet on breast.	_____	[Pl. II. 4.]

Mule.

V = IV. Cr. 2.

EDWTRRNGLDNShYB.

VILL | TRBE | REV | VICI

[Pl. II. 5.]
Edin.

V. Cr. 2.

EDWTRRNGLDNShYB

:VIL | LTRB | ERG | WYCI.

[Pl. II. 6.]

"

—R. T—

"

—RR—

 $\frac{1}{2}d.$ "

EDWTRDVS REXTH

:VIL | LTRB | ERG | WICI.

[Pl. II. 7.]
C.E.B.*Mule.*

Cr. 2.

EDWTRRNGLDNShYB

:VIL | LTRB | ERG | WYCI

[Pl. II. 8.]
Col. Morrieson.*Mule* V = ?

Cr. 2.

EDWTR. TNGLDNShYB

VIL | LTRB | ER.. | VICI

B.M.

VI. Cr. 3.

EDWTRRRNGLDNShYB

:VIL | LTRB | ERG | WYCI.

[Pl. II. 9.]
L.A.L.

VII. "

ED(WTRR)TNGLD(..)Sh
yB

.... | TRBE | REV | VICI

L.A.L.

"

ED(WTR)TNGLDNShYB

[Pl. II. 10.]
L.A.L.

[Pl. II. 11].
L.A.L.

C.E.B.

VIII | $\pi\beta\epsilon$ | $\epsilon\epsilon\upsilon$ | $\iota\iota\chi$ A meaningless jumble of
letters.

The last four are exceptionally uncouth in appearance and badly struck.

EDWARD III.

[Pl. II. 12.]
B.M.VII | $\iota\pi\beta$ | $\epsilon\epsilon\upsilon$ | $\iota\iota\chi$ ·
Bear's head in VII quarter.

F.A.W.

Bear's head in $\iota\iota\chi$ quarter.

C.E.B.

VIII | $\pi\beta\epsilon$ | $\epsilon\epsilon\upsilon$ | $\iota\iota\chi$
Bear's head in $\epsilon\epsilon\upsilon$ quarter.

J.S.F.

VII | $\iota\pi\beta$ | $\epsilon\epsilon\upsilon$ | $\iota\iota\chi$
Bear's head in $\epsilon\epsilon\upsilon$ quarter.[Pl. II. 13.]
L.A.L.VII | $\iota\pi\beta$ | $\epsilon\epsilon\upsilon$ | ...
Bear's head in VII quarter.

Bruun.

VIII | $\pi\beta\epsilon$ | $\epsilon\epsilon\upsilon$ | $\iota\iota\chi$
Bear's head in $\epsilon\epsilon\upsilon$ quarter.

VIII a. Cr. 2.

EDWR π DVSTNG ι h ι BEDWR π DVSTN(G ι h ι B)EDW π RDVS · π RG · · · · · D ·..... DEI · GR π · R ·EDW π RDVS · DEI · GR π · R ·

1239

VIIIb. $\frac{1}{2}d.$ Cr. 2. EDWTRDVS DEI GRN'

D GR'

" "

Bear's head in VII and
ERV quarters.

EDWTRDVS D:GRN

" "

VII | LTB | ERV | ICI
Bear's head in VII and
ERV quarters.

EDWTRDVS D'GRN'

" "

Bear's head in VIII and
ERV quarters.

[Pl. II. 14.]

EWTRDVS DEI GRN

 $\frac{1}{4}d.$ "

VII | LTB | BER | VICI
Bear's head in VII and
BER quarters.

C.E.B.

EDWTRDVS: D'G'

" "

VII | LTB | ERV | ICI
Bear's head in LTB and
ICI quarters.

B.M.

" "

Bear's head in VII and
ERV quarters.

[Pl. II. 15.]

Lord Grantley.

IV

A FIND OF NOBLES AT BORTH (CARDIGAN-SHIRE).

[SEE PLATE III.]

ON June 10, 1930, labourers employed by the Aberystwyth District Council were making excavations for the construction of a new road between Ynys-las and Taliesin when they found a small hoard of nobles in a pocket of rock at a depth of 2 to 2½ ft. beneath the surface of the soil. Thirty nobles were handed over to the coroner and, being declared treasure trove, came to the British Museum for examination. One or possibly two coins had been lost before the inquest; on this point the coroner's inquisition is inconsistent in its statement, "gold coins to the number of thirty-one, thirty of which are now handed to the Coroner, the remaining two having been lost and of which loss satisfactory evidence is produced". Depositions by the foreman and one of the labourers show that twelve coins were removed by the foreman, one of which was lost by his children, and nineteen by the labourer; it is therefore probable that thirty-one is the correct number. In accordance with the regular practice the full value of the find has been awarded to the finder. The thirty coins which I examined are shown on the next page.

LIST OF COINS EXAMINED.

Richard II, London noble		1 coin
„ Calais „		1 „
Henry V, London nobles:		
Class V (mullet at wrist, broken annulet on ship's side)		4 „
VII/VI (pellet at sword-point but none on reverse)		1 „
Class VII (pellet at sword-point and in one quarter of reverse)		1 „
IX/VIII (<i>obv.</i> mullet and annulet stops; <i>rev.</i> trefoil in one quarter)		1 „
Henry VI, Annulet nobles of London		19 „
„ „ „ Calais (A in centre of reverse and flag at stern of ship)		2 „
Total		<u>30 coins</u>

The London noble of Richard II was struck shortly before the close of the reign. It belongs to a series of nobles which have no peculiar mark except a trefoil placed above the sail and terminating the obverse legend; they omit the French title, bear the form **DEI GRATIA**, and have a late style of lettering which is found also on the escallop and the crescent nobles. The position of the group seems to be after the nobles which bear the escallop on the rudder and before those bearing the crescent. The legends are:

**RICARDVS DEI GRATIA REX ANGLIE DNS HIBIE
RQ..**

***HIC AVTEM TRANSIENS PER MEDIUM
ILLORVM BATT**

The marks of abbreviation are wedge-shaped, sloped sharply outward and downward with the point at the top towards the abbreviated word. Weight 119.1 grs. [Pl. III. 1].

The Calais noble is of the same issue and is very similar to the London coin. It has a flag at the stern of the ship and is also different in omitting marks of abbreviation in the legends, double saltires being used in each period, except after Σ where there is one saltire only. The obverse legend ends $\Sigma Q T . \bullet .$, and the reverse ends $\Sigma M E D I V \times I L L O R V M \times I B \Sigma T$. Weight 118.7 grs. [Pl. III. 2].

The nobles of Henry V are of the following groups (see *Num. Chron.*, 1930, pp. 44 ff.):

Group V. Mullet by wrist and broken annulet on side of ship.

Obv. A new die of V (d); $\mathfrak{h}$ with flaw mended both in *Henric* and *Hyb*.

Rev. V (h) c; $\mathfrak{h}$ in centre mended, $\mathfrak{h}$ in *Ihc* unmended, P with double flaw. 105.9 grs.

Obv. V (s) 1; blunt-footed Ω , new $\mathfrak{h}$ with long spur, ordinary form of D (not $\mathcal{C}$ reversed).

Rev. A new die of V (t); new Ω with ball tail, $\mathfrak{h}$ with long spur, ordinary P (no flaw in foot). 107.8 grs.

Obv. A new die of V (s).

Rev. A new die of V (t). 107.9 grs.

Obv. and *Rev.* New dies of V (t). 107.8 grs.

Group VII (pellet at sword-point) muled with Group VI.

Obv. VII (c) 4; ropes 2 and 1, trefoil by shield, mullet and annulet by wrist, annulet on ship's side, pellet at sword-point.

Rev. A new die of VI; **P** with broken foot, no special marks. 107.6 grs.

Group VII. Pellet at sword-point and in one quarter of reverse.

Obv. and Rev. New dies of VII (c). 107.8 grs.

Group IX (mullet and annulet stops) muled with Group VIII (trefoil in one quarter of reverse).

Obv. A new die of IX, which has no annulet after **DNS**.

Rev. A new die of VIII. 107.6 grs. [PL. III. 3].

The London nobles of Henry VI are all of the first, or annulet, issue; the following varieties are noted:

Obv. Ship's ornaments, as on latest coins of Henry V, lion-lis-lis-lion-lis.

Rev. The letter **P** has a broken foot (see *Num. Chron.*, 1930, p. 52, no. 9) as on the latest coins of Henry V.

Five coins weighing 107.7, 107.1, 107.0, and from the same obverse die 107.4 and 106.8 grs. [PL. III. 4]

The obverse die common to the two coins has the letter **Y** of **hYB** punched over **I**. This confirms my view that the earliest issue of the annulet (Henry VI) nobles bore as its privy mark the spelling **hIB** in place of **hYB**. On a mule which has the obverse of Henry V, group IX, and reverse of Henry VI, the **Y** of **hYB** is changed to **I**; the die of a British Museum coin with the early ship's ornaments (lion-lis-lis-lion-lis) reads **hIB**, and this further alteration from **hIB**

to **hVB** shows, I think, the restoration of the usual spelling when the form **hIB** ceased to be the privy mark.

Obv. Ship's ornaments, as on all subsequent issues,
lis-lion-lis-lion-lis.

Rev. Trefoil by lion's head in upper right quarter.
The letter **P** still has a broken foot.
One coin weighing 107.2 grs.

Obv. Similar to preceding.

Rev. No special marks; **P** still has a broken foot.
Six coins weighing 108.1, 107.7, 107.4,
107.3, 107.2, and 107.1 grs.

Obv. Similar to preceding.

Rev. New form of **P** without broken foot.
Seven coins weighing 108.1, 107.9, 107.6,
107.5, 107.4 (2), 106.5 grs. [Pl. III. 5].

The two Calais nobles of Henry VI are both of the early type with the letter **Q** in centre of the reverse as well as the flag at the stern of the ship; on both coins the letter **P** has the broken foot. The weights are 107.8 and 106.0 grs. (the latter has had a piece cut off the edge: Pl. III. 6).

The varieties to be found on annulet nobles of Henry VI are but few. The forms of the letter **P** and, less clearly, the letter **Q**, divide the earlier and later coins, and give an indication of the position of the small varieties that occur. Thus, obverse varieties are:

I. With old form of **Q** (with tall curve, often very sharply cut as in *Num. Chron.*, 1930, p. 52, no. 8), and

always combined with reverses having the broken-footed P.

(a) Ship's ornaments: lion-lis-lis-lion-lis

(i) **hIB**

(ii) **hVB**

(b) Later ornaments, viz. lis-lion-lis-lion-lis.

II. With later form of **N** (with lower curve) and combined with reverses bearing new unbroken P.

(a) Without special marks.

(b) Fleur-de-lis after *Henric* omitted, the trefoil stop taking its place.

The reverse varieties are:

I. With broken-footed P:

(a) No special marks.

(b) Pellet in upper right quarter.

(c) Trefoil in upper right quarter.

II. With new unbroken P:

No special marks, but the misspellings *Traniens* and *Trasiens* occur.

The shape of the trefoils in the tressure on the reverse is worth noting; there are three distinct forms:

1. Large, the two side foils long and plain.

2. Small, the three foils of equal size with pointed tips.

3. Large, the side foils long and curled.

No. 1 occurs on all nobles which have on the obverse the lion-lis-lis-lion-lis ornament, and also on a few of the nobles with the trefoil in one quarter of the reverse; no. 2, which seems identical with the form on the late coins of Henry V, is found on the remaining trefoil-marked coins and the rest of the

nobles of group I (broken P), and on a few of group II (unbroken P); no. 3 is used on the remaining nobles of group II, including those which on the obverse omit the fleur-de-lis after *Henric*. Calais nobles with Q on the reverse have no. 1; those with h on the reverse have nos. 2 and 3.

The classification into earlier and later groups has more than a mere academic interest. The Calais coins bearing the letter Q on the reverse always have the broken P; those with h in the centre of the reverse are rarely found with the broken P, commonly with that letter unbroken; therefore the mint initial was, as in the reign of Edward III, used only on the earlier issues.¹

A more important point is also established. The nobles of York are, so far as I am aware, never found with the broken P. There is therefore a fairly substantial group of nobles of both London and Calais which precedes any York nobles at present known. The opening of the York mint was ordered in November, 1422, but the appointments of a controller and assayer and also of a warden in July, 1423, suggest the conclusion that it was not till August, 1423, when the only known account of this mint commences (the account is for the period August 12, 1423, to August

¹ The removal of the mint initial in both reigns is unexplained. It is just possible that the dies bearing the letter Q were made at Calais, the others at London. In Henry de Brisele's indenture of March, 1363, and in later indentures, it was ordered that the die-cutter should work either at Calais or at London as should be found most profitable. We have no evidence where he worked at any time except in 1425 to 1431, when the Exchequer accounts have entries for payments to Gilbert Brandeburgh, engraver of dies at the Tower, for dies for coinage at Calais.

14, 1424, and enters £2,538 of gold and £330 of silver), that the coinage of York began; a petition presented in October, 1423, by the Northern counties made complaint that Goldbeter had set up his mint at York and had since withdrawn himself and his workmen, and demanded that he should be ordered to return to the city to coin there as he had done before (i.e. presumably between August and October, 1423). It follows, therefore, from the York evidence that group II of the nobles (the unbroken P) came in approximately at the time that the work at York opened in August, 1423. Henry's accession is dated September 1, 1422; the varieties of group I, the form *hVB* for *hVB*, the pellet or trefoil on the reverse and, possibly, also the change of the ship's ornaments may be accepted as privy marks which will occupy nine or twelve months; the change of the letter P may reasonably be placed in June or September, and, in the absence of York nobles with the broken P, the latter month is more likely. In the second group, with unbroken P, varieties are no more numerous than in group I; there is the omission of the fleur-de-lis after *Henric*, and varieties, which seem deliberate, in the spelling of *Transiens*; the circumstances of the coinage at York are in favour of limiting the annulet coinage to 1424 or 1425; the account of the Royal mint terminates in August, 1424, and it is reasonable to suppose that it was then closed, but the archbishopric was void until the appointment of Kemp in July, 1425. The earliest episcopal coins of York are of the rosette-mascle issue and were presumably struck soon after Kemp's appointment. The rosette-mascle coinage is likely, therefore, to have been in issue from 1424

or 1425 till 1428, when the issue of gold at Calais dwindled out and that mint concentrated on a large silver output.

The deposit of the treasure at Borth can therefore be assigned to 1425 or the previous year; it contained London nobles of the second group of the annulet coinage in fairly large proportion (seven out of thirty) and nothing later. York coins were not found, and the Calais mint was only represented by two specimens of the earlier issue, which bears the mint initial in the centre of the reverse.

The condition of the coins, with the exception of half a dozen pieces, is extremely fine; it is curious that the two heavy coins of Richard II, both in very good condition and within a grain and a half of standard weight, should have survived with the lighter currency.

The thirty coins were struck from twenty-nine obverse and thirty reverse dies. Seven of the London nobles are from the same obverse die as nobles in the Horsted Keynes find (*Num. Chron.*, 1930, p. 293, nos. 25, 29 and 30, 38, 42, 44, 47, 49), though there are no reverse dies common to the two finds.

G. C. BROOKE.

V.

TWO UNPUBLISHED ENGLISH MEDALS.

State of Britain (1714-15) Medal.

[SEE PLATE IV]

NEW medals illustrative of English history are always of interest and are not frequently found. The medal illustrated on PL. IV. 1, which has recently been acquired by the British Museum, is apparently unpublished.

It represents a comparison of the state of Britain at the beginning and end of 1714, that is to say, before and after the accession of George I (August 1, 1714); its political aspect is strongly anti-Jacobite.

The obverse shows the condition of the country at the beginning of the year; the exergual inscription ALBION INEVNTE ANNO 1714. MATTH. XIII. 25. 26. 27. 28. 29 applies to it the parable of the tares. By the omission of the last verse (Let them both grow together until the time of the harvest, &c.), which is the text of the reverse side of the medal, emphasis is laid on the necessity of letting the tares grow up with the wheat until the harvest is ripe "lest while ye gather up the tares, ye root up also the wheat with them". The existence of the tares, which are Jacobite intrigue, among the good wheat, is the dominant note of this side of the medal and the legend round the design is INFELIX LOLIVM ET STERILES DOMINANTVR AVENAE (the accursed darnel and sterile tares are in control, Virgil, *Georgics*, i. 154).

In the foreground are fields in which tares are growing among the crops; the background is a seascape with a harbour at left protected by a row of hills or dunes and a lighthouse at the extreme left, to the right is a small fort. The rising sun, *le roi soleil* in splendour, is shown, and the few ships depicted are sailing towards it; five appear, three on the horizon, one near the harbour, and the fifth sailing out of the harbour mouth.

The reverse shows the altered conditions at the end of the year; in the exergue is ALBION EXEVNTE ANNO 1714. MATTH. XIII. 30. APOC. XIV. 14. 15. 16. 1715. The time of the harvest is now come. "Let them both grow together until the harvest: and in the time of the harvest I will say to the reapers, Gather ye together first the tares, and bind them in bundles to burn them: but gather the wheat into my barn" (Matt. xiii. 30). The reference to Revelation is the vision of the Angel that came out of the Temple and cried "with a loud voice to him that sat on the cloud, Thrust in thy sickle and reap: for the time is come for thee to reap; for the harvest of the earth is ripe. And he that sat on the cloud thrust in his sickle on the earth; and the earth was reaped." The foreground of the design is a field with bundles of stubble being burnt, and on the right of it are large barns; to the left is a line of hills. The sea scene in the background depicts several ships lying in harbour with furled sails and two other ships sailing on the open sea. There is a large fort or fortified harbour on the right. In the sky is the sun in eclipse and the date, 3 May 1715, the date of a total eclipse which was visible in London. The legend round the design is

ECCE LEVES STIPVLAE DEMPTIS ADOLENTVR
ARISTIS (the corn is garnered and the stubble
burning, Ovid, *Metamorph.* i. 492).

The general meaning of the allegorical representations of political conditions at the beginning and end of 1714 is clear enough. The medal was issued as an anti-Jacobite propagandist piece, showing the country before the death of Anne as being at the mercy of Jacobite intrigue, the tares choking the good fruit of the earth, until the Hanoverian accession brought the time of the harvest when the crops could be stored and the Jacobite stubble destroyed. The splendour of Louis XIV is thus brought to eclipse, and as in 1706 the relief of Barcelona coincided with an eclipse of the sun, so too the accession of George I and the suppression of Jacobite intrigue was followed by an eclipse on May 3, 1715. On both occasions medallists made use of the obvious allusion to *le Roi Soleil*.

The meaning of the ships on either side of the medal is less obvious. It may be that the empty harbour and the few ships scattered on the high sea at the commencement of the year denote poverty of trade and that the harbour full of ships on the other side implies prosperity. But the ships in harbour with furled sails are hardly indicative of busy trade. Possibly the ships are naval ships, on the one side seaching the seas for invading forces and on the other inactive now that the possibility of invasion is ended by the accession of the Hanoverian king. Or again stronger emphasis might be laid on the fact that the few ships that appear on the *ineunte anno* side are sailing off in the direction of the rising sun, that is to say, our ships are gone or going to help the Stuarts in

the land of the *Roi Soleil*; at the end of the year our ships are home again and the *Roi Soleil* is undergoing eclipse.

I have to express my thanks to Professor G. M. Trevelyan, O.M., who has most kindly given me his assistance in the interpretation of the medal.

Restoration (Gigantomachia) Medal, 1660.

Another medal that has recently been acquired for the National Collection is a new variety of the Gigantomachia by George Bower. The medal described in *Medallic Illustrations*, vol. i, p. 458, no. 50, has as its reverse design the giants fallen among the rocks under the merciless cannonade of Jupiter's thunderbolts. The picture is no doubt a highly coloured allegorical representation of Charles returning victorious and hurling his foes to destruction; an allusion to the regicides seems too finely drawn.

The new medal has an even more ugly representation of this ugly design. In the centre of the field is a formless mass that must be intended for a large central rock, down from which one miserable specimen of a giant is diving among the rocks below; another has already landed headfirst on a group of rocks at the left; others lie in various attitudes among or under rocks in the foreground. Below is the signature *G. Bower F.* The obverse is struck from the same die as that described in *Med. Ill.* Perhaps the new medal shows an earlier design which was replaced by the better reverse of *Med. Ill.*, no. 50. It is interesting only as showing what bad work Bower was capable of producing. The reverses of the two medals are illustrated on Pl. IV. 2, 3.

GEORGE C. BROOKE.

MISCELLANEA.

ADDITIONS TO THE DELTA (BENHA EL-ASL) HOARD.

IN the *Numismatic Chronicle* (Fifth Series, vol. x, 1930, pp. 83-106) Mr. E. S. G. Robinson described a most interesting hoard of archaic Greek coins from Egypt, recently acquired by the British Museum. It so happened that in the spring of 1929 a small parcel composed of very similar coins had been brought to New York and offered to the writer by a well-known Continental dealer. The latter at that time made the definite statement that these coins had recently been sent to him from Egypt where they had just been found, presumably in the Delta. Because of the interesting nature of the coins the writer purchased two of the pieces and drew up a somewhat superficial list of the remainder. The matter was thereupon allowed to lapse into semi-oblivion until the appearance of Mr. Robinson's article, when it at once became apparent that the two parcels of coins, because of their practically simultaneous appearance upon the coin market, as well as the striking similarity of their composition and general appearance, must belong to one and the same hoard. Upon apprising Mr. Robinson of this fact he very kindly offered hospitality in the pages of the *Chronicle* for the following brief description of the additional coins.

THASOS.

1. *Obv.* Satyr to r. ravishing a nymph.

Rev. Quadripartite square incuse.

Stater. Cf. Babelon, *Traité*, iii¹, Pl. LV. 18.

ACANTHUS.

2. *Obv.* Lion r. attacking bull l. ; in exergue, inverted bud.

Rev. Quadripartite square incuse in swastika form.

Attic tetradrachm similar to Babelon, *Traité*, iii¹,
Pl. LIII. 8.

MENDE.

3. *Obv.* Ass (ithyphallic) to r.; on his back crow pecking at his tail. On r., vertically placed, [MIN-
ΔΑΙ]ON.

Rev. Quadripartite square incuse, unusually small in size.

Tetradrachm. 26 mm.; 15.62 grm. (Neither die is represented in S. P. Noe's Mende (Kaliandra) Hoard, *Num. Notes and Monogr.*, no. 27. The light weight is due to the fact that a portion of the flan was broken off by the chisel cut.)

ORESSCII.

4. *Obv.* Centaur r. ravishing nymph; portions of the inscription ΝΩΙΧΣΗΡΩ in field l.

Rev. Quadripartite square incuse divided by raised lines.

Stater. 21 mm.; 9.78 grm. Similar to the piece (no. 7) described by Mr. Robinson from the hoard.

TERONE.

5. *Obv.* Amphora, probably with pear-shaped cover.

Rev. Rough quadripartite square incuse.

Tetradrachm (?). 24 mm.; 8.99 grm. A fragment (about two-thirds of the whole) very similar to the piece (no. 8) described by Mr. Robinson.

UNCERTAIN THRACO-MACEDONIAN.

(Formerly assigned to Lete.)

- 6-9. *Obv.* Satyr r. and nymph l. in courtship.

Rev. Square incuse divided diagonally.

Statars exactly similar to the pieces (nos. 9-14) described by Mr. Robinson.

ERETRIA (?).

10. *Obv.* Gorgon-head.

Rev. Incuse square within which lion's head facing.

Tetradrachm. 25 mm.; 17.07 grm. Same obverse and reverse dies as *B.M.C., Central Greece*, Pl. XXII. 9.

PHASELIS.

11. *Obv.* Prow of galley r. in the shape of a boar's head.

Rev. Rough square incuse.

Stater similar to Prowe Coll., Egger sale, xlvi, May 1914, Pl. XXXI. 1925.

Unfortunately, only the sizes and weights of nos. 3 and 10 (purchased by the writer) and of nos. 4 and 5 were recorded. As with the specimens described by Mr. Robinson, so each and every coin of the present parcel bears a vicious chisel cut biting deeply into its flan. They bring but two additional varieties (Mende and Eretria) to the previously known pieces from the Benha el-Asl Hoard, but they serve to increase that already preponderant proportion of Thraco-Macedonian issues pointed out by Mr. Robinson (*loc. cit.*, p. 94). While the tetradrachms of Mende are known to have occurred with considerable frequency in Egyptian hoards of archaic Greek coins, the present appears to be the first authenticated instance that a specimen of the well-known Eretrian (?) Gorgonion issue has been found in the land of the Nile.

E. T. NEWELL.

FURTHER NOTES ON THE DELTA (BENHA EL-ASL) HOARD.

In the course of further inquiries, which Mr. Newell's communication printed above led me to make into the circumstances of this find, some additional information has come to light. The hoard was originally divided into three portions, one I have so far been unable to trace: the second reached America and is dealt with by Mr. Newell above: the greater part of the third was acquired by the British Museum and described in my previous article. The remainder of this third portion, consisting almost entirely of fragments and dumps, has also passed recently into the National Collection through the generosity of Mr. Nahman of Cairo and is worth placing on record. In some cases cleaning was necessary in order to decipher the type, otherwise the pieces have not been touched. All of course are of silver.

ABDERA.

1. *Obv.* Griffin seated l. (trunk and legs only).

Rev. Square incuse.

Fragment, 8.68 grm.

ACANTHUS.

2. *Obv.* Lion r. attacking bull, l. (bull's head and lion's body only).

Rev. Swastika incuse.

Fragment, partially cleaned, 7.89 grm.

MENDE.

3. *Obv.* Ass r. (head only).

Rev. Swastika incuse.

A fragment, 4.24 grm.

NEAPOLIS DATENON.

4. *Obv.* Gorgoneion (lower part only).

Rev. Quadripartite square incuse.

Fragment, 7.27 grm.

ORESSCH.

- 5-7. *Obv.* ΝΩΙΚΞΗΡΩ ; Centaur and nymph.

Rev. Quadripartite square incuse.

5. Two complementary fragments, one partially cleaned, weighing together 9.97 grm.

6. Fragment, 7.45 grm.

7. Fragment, inscription doubtful, 3.16 grm.

TERONE.

8. *Obv.* Amphora (left side only).

Rev. Square incuse.

Fragment partially cleaned, 3.74 grm., the missing part completing the larger fragment described under no. 8 in my previous publication. The whole coin, therefore, weighs 14.32 grm., very nearly the same as the Luynes specimen (no. 1547) and is not, as I had suggested, of the Attic standard.

CHALCIS.

9. *Obv.* Eagle flying l. with snake (hind part only).
Rev. Wheel with four (?) spokes ; square incuse.
 Fragment partially cleaned, 9.43 grm.

ATHENS.

- 10-14. *Obv.* Head of Athena of pre-Marathonian type.
Rev. Owl.
 10. With chisel-cut and fragment of other coin adhering ; 17.59 grm.
 11-14. Fragments of different coins, 9.17, 6.89, 6.35, 5.44 grm. respectively.

AEGINA.

- 15-16. *Obv.* Sea turtle with row of dots down the back.
Rev. Square incuse of mill-sail pattern.
 15. Chisel-cut, 12.46 grm. Threads of the woven fabric in which the hoard must have been wrapped are still adhering to the reverse.
 16. Fragment partially cleaned, 5.22 grm.

UNCERTAIN.

17. *Obv.* Triskeles of human legs.
Rev. Floral-stellar pattern in square incuse.

Chisel-cut, 11.28 grm.

The same types as the three unpublished coins described in my original publication, nos. 27-9.

The weight of the present specimen, which has not been cleaned, supports the view that the standard on which these coins were struck is that in use in Cyprus and the adjacent coast of Asia Minor rather than the Aeginetic.

- 18-24. Seven pieces of coins too fragmentary for identification.

25-9. Cast dumps, like those described under nos. 32-9 of my original publication.

48.40, 11.94 (chisel-cut), 4.47 (chisel-cut, partially cleaned), and 8.24 grm. respectively.

30-1. Fragments of similar dumps, 11.69, 8.85 grm.

It has not been possible so far to obtain any information as to the contents of the third of the portions into which the hoard was originally divided. This is all the more regrettable as it now appears that the hoard must have been tampered with at an early stage. Dr. H. Gaebler, in the course of a recent correspondence with me, has expressed the view, which he has kindly consented that I should state here, that the two coins with the sphinx type (nos. 30-1 of the previous publication) are not genuine. It is obviously not desirable to mention the various reasons which have led him to this view, except to say that they involve the other coins of the same type, style and fabric (e.g. Babelon, *Tr.*, Pl. XXVIII. 24), and that they appear to me quite convincing. Dr. Gaebler tells me that he also regards the Terone tetradrachm no. 8 and the Luynes coin from the same die as false.

E. S. G. ROBINSON.

REVIEW.

A Handbook of the Coinage of the Byzantine Empire. Part II: Anastasius to Michael VI. By HUGH GOODACRE, F.R.N.S. pp. iv, 241 (Spink & Son, Ltd. London, 1931). Price 10s.

The appearance of Mr. Goodacre's second part will be eagerly welcomed by collectors and students of Byzantine coins. They have learned to value his skill in reducing a large material to manageable proportions and in providing the type of historical note that creates and fosters interest; and, in spite of the recent reissue of Sabatier, they will continue to need a cheaper and handier guide. Mr. Goodacre follows much the same plan as before. He prefaces each reign with well-chosen notes, summarizes the coins briefly under their denominations, assigns approximate modern values, and gives a conspectus of mints and the number of coins assigned to each in the British Museum Collection. The book is well illustrated with cuts in the text and has serviceable indices. If we may indulge in one small grumble, the treatment of mints, though admirably brief and concise, is a little inadequate for any advanced study.

It is very much to be hoped that the appearance of Mr. Goodacre's book will concentrate attention on this rather neglected branch of numismatics. The fashion of disparaging Byzantine history and civilization has perhaps gone out; but in too many cases it has only given way to sheer indifference. Byzantium and its coinage have a legitimate claim on a share in our interests and further study will certainly enhance their attractiveness. We may instance one small point we observe on p. 107. The formula ANA-NEO on bronze of Constans II is quite correctly compared to the FEL• TEMP• REPARATIO of Constantius II and Constans—but it should be added that in both cases there is reference to the coming centenary of Rome—in A. D. 348 in the one case and A. D. 648 in the other.

We wish Mr. Goodacre's book a prosperous continuation on its way.

H. M.

VI.

NOTES ON SICILIAN NUMISMATICS.

[SEE PLATES V AND VI.]

THE following are a number of notes collected in the course of my general studies in Greek numismatics. The greater number of the coins, on which the following observations are based, are in the cabinet of the Museo Nazionale of Palermo, the series of coins in which, if it could be freely studied, would provide material for a number of memoirs. Here I shall confine myself to the examination of a few unpublished coins, and some others, scarce or inaccurately published or which, if published, have not yet been utilized for historical and numismatic research because they have not been satisfactorily illustrated.

AGRIGENTUM.

Obv. Eagle standing to left, above AKRAC; below
 ⲥⲟⲧⲙⲁ

Rev. Crab; around the upper margin ⲥⲟⲧⲥⲉⲛⲁⲓⲛ, on the body of the crab traces of an earlier striking.

R; 22-19 mm.; 8.62 grms.; didrachm.

Palermo Museum. *Giornale*, 18102. [Pl. V. 9.]

The name 'Εξάκεστος, perhaps of a magistrate, has already been noted in the abbreviated form 'Εξα on the didrachms of Agrigentum: Salinas, *Le Monete delle antiche città di Sicilia*, Pl. IV, no. 24 (de Luynes), no. 25 (Brit. Mus.); Grose, *Cat. of McClean Coll.*, i, Pl. 65, no. 3.

HIMERA.

Obv. Nymph standing to right, wearing chiton and full outspread himation which hangs straight down behind from the left shoulder and right arm; the left hand is raised to the face. The legend 'Ιμέρα retrograde is in the field on the right, written upwards.

Rev. Quadriga, the horses of which are advancing slowly to the right. The charioteer is ΠΕΛΩΝ whose name is placed above him; border of dots.

Æ; 20 mm.; 7.9 7 grms. (corroded); didrachm.

Palermo Museum. *Giornale*, 18122. [Pl. V. 10.]

Of this type of Himera hitherto only the tetradrachm and drachm have been known (Weber, *Num. Chron.*, 1892, Pl. XV. 2; Gabrici, *Numism. di Imera*², Pl. IV, no. 2, Pl. VIII. 1; Hill, *Coins of Ancient Sicily*, Pl. IV. 4, *Cat. Strozzi*, no. 1328).

Obv. Nymph sacrificing; little Silenos and altar as in the latest tetradrachms of Himera (Gabrici, *op. cit.*, Pl. VI. 12); a fish below the nymph; in the field to the left of the nymph above 卐

Rev. Slow quadriga to right as in preceding specimen; in exergue ΙΜΕΡΑΙΟ[N]

Æ; 27-25 mm.; 16.42 grms.; tetradrachm.

In a private collection.

I do not know of another tetradrachm of Himera with the svastika.

MORGANTINA.

Obv. Head of Athena to left with high crested Corinthian helmet; the hair hangs down behind the neck and on the temples. In the field on left are traces of letters; on the right of the lower extremity of the crest can clearly be read the last four letters of the legend ---- ΤΙΝΑ

Rev. Victory flying to left with ἀφλαστον in outstretched hand; the left hand is lowered holding the lower

hem of the himation; in front is a sprig of laurel with one leaf; around this

Æ; 14 mm.; 1.11 grms.; hemilitron.

Termini Imerese Museum. [Pl. V. 1.]

The legend of this coin can easily be connected with the form [*Mopyar*]*tiva*, which is the name of a town of Sikel origin, the rare coinage of which has a certain typological affinity with that of Camarina (Holm, *Sic. Münzw.*, n. 232) after 424 B. C. This new coin associates with the head of Athena a reverse, the type of which is identical with that of the hemidrachms and bronze coins of Himera, attributed to 472-413 B. C. If we consider the archaic treatment of the head of Athena, the coin may be earlier than 424 B. C., in which year Morgantina became a dependency of Camarina (Holm, *Gesch. Sicil.*, i, p. 362; ii, p. 8).

I cannot, however, find any kind of agreement between the mark of value, which is that of the hemilitron, and the weight 1.11 grms. which ought to be much lighter, considering that the contemporary silver litrae of the other cities of Sicily weigh round about .80 gm. In view of such a difficulty, I would suggest that this silver coin must have corresponded to a litra of bronze of very heavy weight, in use in a town of Sikel origin.

CATANA.

Obv. Laureate head of Apollo to right with long hair hanging behind his head (type of the middle of the fifth century related to types of Leontini); in front downwards **KATANA** [- - -]

Rev. Slow quadriga right with charioteer and Nike crowning the horses; in the exergue graffito executed in very fine dots **ΜΥΣΚΕΛΟΣ ΕΔΩΚΕ**

Æ; 26 mm.; 17.10 grms.; tetradrachm.

Palermo Museum. *Giornale*, 18097.

The coin was dedicated as an offering to some divinity. Among the individuals who bore the name Myskellos or Myskelos was the founder of Croton (*Diod.*, viii, 20, 21).

ERYX.

Obv. Nymph facing with head turned to left, standing beside a little altar with flames; in her right hand she holds a patera with which she sacrifices on the altar; her left arm is raised; on the right, written upwards, ΜΙΚΥΡΕ; on left Μ [O]

Rev. Dog walking to right with muzzle down; above, a spray of ivy; in the exergue a branch; border of dots.

Æ; 12 mm.; 0.75 grm.; litra.

Palermo Museum, from the Fraccia collection.

[Pl. V. 4.]

Obv. Similar to the preceding; on the right, written upwards, Α-ΜΙΚΥΡΕ

Rev. Dog walking to right; above, a male head with small horn on forehead, turned to right; in the field on right of this little head ϠΟΓ; behind the haunch of the dog there is certainly a Μ; in the exergue Α

Α; 13 mm.; 0.69 grm.; litra.

Palermo Museum, from the Fraccia collection.

[Pl. V. 5.]

This interesting little coin described by G. Fraccia in 1858 and published by him in 1861,¹ was again discussed by A. Salinas in 1870.² The former read Πορ - κ - α, and recognized in this name a form of

¹ G. Fraccia, *Sopra un nummo Erimo-Ericino inedito*, Palermo, 1858. Id. *Preventiva esposizione di taluni monumenti segestani* (1861), Pl. I. 2. Id. *Antiche monete siciliane* (Buonarroti, Rome, 1889-90), p. 16, n. 41.

² A. Salinas, *Sul tipo dei tetradrammi di Segesta*, p. 38 f. Id. *Le monete delle antiche città di Sicilia*, Pl. XXII. 25.

accusative of the name of the river *Πόρπαξ*, which was worshipped in human form at Segesta (Ael. V. H., ii, 33); the latter read *Πορ-ν-α*, which he took to be an epithet of the Aphrodite of Eryx on the analogy of the Aphrodite worshipped at Abydos (Athen. *Deipnos*. 572).

An examination of this coin leaves no room for doubt as to the significance of the horned head, and I think we may confirm Fraccia's reading *Πόρ[πα]κ-α*, especially as the letter behind the dog is certainly K.

HIPANA.

Obv. Eagle standing to left on an Ionic capital; around, from right to left, *Π ΑΝΔ Ε ΤΑΝ*

Rev. Dolphin to left; a shell below.

At; 10-12 mm.; 0.56 grm.; litra.

Palermo Museum.

[Pl. V. 3.]

In the description of this little coin it is customary to ignore a mark (? a letter) below the eagle's beak; it may perhaps be a decorative element as on the similar coins of Motya (Hill, *Coins of Ancient Sicily*, p. 95, fig. 22).

SELINUS.

Obv. Female figure seated to left on a rock, raising her veil with left hand and extending the right towards a snake; above, a selinon leaf; border of dots.

Rev. Man-headed bull to right; above, *ΞΕ - - - ΕΞ*. The legend should be *Σελίνοες*, but the four letters in the middle have disappeared, because a circular countermark has been stamped over them containing a female head to right wearing stephanos.

At; 12 mm.; 0.73 grm.; litra.

Palermo Museum.

[Pl. V. 6.]

The little head of the countermark recalls with its stephanos the silver coin of *Thermae Himerenses* and some bronze coins with the legend *Ziz* (Gabrici, *Numism. di Imera*, Pl. VII. 1-3; *Monetaz. del bronzo*, Pl. X. 34). This countermark has a significance similar to that of the *litrae* of *Himera* already known with *Selinuntine* countermark.

PANORMUS.

1. *Obv.* Male figure to front, wrapped in himation, with head to left, sacrificing at a small altar on which he pours a liquid from a patera in his right hand. Behind is a bull and in background a palm-tree; around, ΠΑΝ ΟΡΜΟΞ.

Rev. Quadriga with charioteer to left; above, a dolphin; in the exergue a sheep dog.

Æ; 28-25 mm.; 16-90 grms.; tetradrachm.

Collection of Baron Bordonaro in Palermo.³

[Pl. VI. 1.]

I know one other specimen of this very rare coin, that in the *Naville Catalogue*, iv, 1922, Pl. XI. 285.

2. *Obv.* Laureate head of Apollo right; in front,
[ΝΟ]ΧΙΤΙΜΡΟΜΑ[Π]

Rev. Quadriga moving slowly to right, the charioteer has the reins in his right hand and in left the whip; a little Nike crowns the horses.

Æ; 22 mm.; 17-10 grms.; tetradrachm.

Palermo Museum. *Registro*, 1923. [Pl. VI. 2.]

3. *Obv.* Head of nymph to right with hair in knot with loose strands on top of head; four dolphins; around
ΓΑΝΟΡΜ[Ι]Τ.

Rev. Quadriga to left with charioteer, of whom only the front half is on the flan; above, a dolphin; below,

³ I have to thank the noble owner for permission to publish it.

the back of a sheep dog. Same die as the tetradrachm no. 1 above.

At; 24-28 mm.; 16.71 grms.; tetradrachm.

Palermo Museum. *Giornale*, 18128, from the Hirsch Sale, xix, 216. Another silver specimen, but more complete, with a broad flan, was sold in the Hirsch Sale, xviii, Pl. XXX. 2262).

[Pl. VI. 3.]

4. *Obv.* Head of nymph right, with hair in loose locks on the occiput; behind, a lobster.

Rev. Dog to right; around, Π ANO P[M]OΞ

At; 20-21 mm.; 8.26 grms.; didrachm.

Palermo Museum. *Registro*, 1718. [Pl. VI. 4.]

5. *Obv.* Head of nymph to right with broad band on forehead, ear-rings and necklace.

Rev. Dog standing to right; above, a four-spoked wheel; around, [ΠAN]O PMO; border of dots.

On the obverse traces of restriking.

At; 20-19 mm.; 8.36 grms.; didrachm.

Palermo Museum. [Pl. VI. 5.]

6. *Obv.* Head of nymph to right with hair falling in two masses on the temples, gathered up in a wavy curve below the occiput; in front, ivy leaf.

Rev. Dog to right; around, [Π]ANO PMOΞ

Restruck; in addition to the irregularity of the surface, there remains of the first die an N behind the dog.

At; 23-19 mm.; 8.24 grms.; didrachm.

Palermo Museum. [Pl. VI. 6.]

MOTYA.

1. *Obv.* Head of nymph facing slightly to left, with thick head of hair and necklace; on left three dolphins.

Rev. Crab; between claws, a fish; below, *mtva* in Phoenician characters; linear border.

At; 21 mm.; 7.90 grms.; didrachm.

Palermo Museum. *Giornale*, 2705. [Pl. VI. 7.]

2. *Obv.* Female head to right with hair bound with long narrow ribbon, wound several times around it; around, three dolphins; near the front of the neck α

Rev. Naked youth ($\alpha\pi\omicron\beta\acute{\alpha}\tau\eta\varsigma$) reclining sideways on horse; in his left hand a rod, in the right the reins; around, MOIA-YTOM ; below, a pistrix; border of dots.

Restruck; several traces of the earlier die on the reverse, in front of the feet of the horse is an E of the earlier legend.

R ; 21 mm.; 8.30 grms.; didrachm.

Palermo Museum. *Registro*, 967. [Pl. VI. 8.]

A specimen with obverse from the same die as this in the Landolina collection, whence it passed to Imhoof-Blumer (*Zur Münzkunde*, &c., Pl. VII. 1; Holm, *Gesch. Sic. Münzw.*, Pl. IV. 9).

3. *Obv.* Female head to right with hair hanging down from the top of the head and forming two masses on the temples and below the occiput, bound by a riband; in front, MOTYAI[ON]

Rev. Dog standing to right with head raised; under his feet a short bar; border of dots.

R ; 22 mm.; 7.98 grms.; didrachm (restruck?).

Palermo Museum. *Registro*, 1794. [Pl. VI. 9.]

The tetradrachm of Panormus with Selinuntine types should be discussed along with the unique didrachm of Solus with Selinuntine types, which was published by Imhoof-Blumer and again by Hill (*Coins of Ancient Sicily*, Pl. VI. 14). This adoption of Selinuntine types by two cities of Punic origin cannot be historically justified, except after the fall of Selinus. Of the same date as the Panormitan tetradrachm is the other tetradrachm, also Panormitan, the reverse of which is taken from the same die as the first, and the female

head on which is stylistically parallel to that of the Panormitan didrachm on Pl. VI. 4.

Plate VI shows a remarkable group of coins which in technique, style, types, and legend deserves to be seriously studied. Panormus adopts the types of Selinus and Segesta, Motya adopts the types of Himera and of Segesta. It does not seem to be one of those cases, frequent in ancient coinage, in which a type of one city is borrowed by another; it is a case of that supersession which means the subjection of the lower party, and indeed the defeated Selinus and Segesta had to suffer terrible trials during the invasion of 410. It is historically certain that the power of Selinus was reduced to nothing, and that the citizens of Segesta had to resign themselves to subordination to Panormus. The two cities of Phoenician origin, which after 409 assumed a position of the first rank under the Carthaginian *ἐπικράτεια*, were Motya and Panormus (Holm, *Gesch. Sic.*, ii, 84). And, in fact, when in 407 Hermocrates invaded Punic territory from Selinus, he attacked the forces of Motya and Panormus (Holm, *op. cit.*, p. 85). The historical sources that have come down to us do not, however, give us a sufficiently clear account as regards Segesta, which, after all, had given Carthage the occasion for her victorious intervention in Sicily, nor as regards Eryx; the condition of dependence imposed upon them, so far as we know, seems therefore to have been excessively severe treatment. And Eryx also, which had struck the fine tetradrachms, had to submit to the same fate as the Greeks and the natives. I do not think that its mint was working after 409. The proof thereof is that under Timoleon both Eryx and Segesta struck

bronze coins like all the other peoples of Sicily who experienced the privileges of freedom.

As to Selinus, which had always opposed the Elymian and Phoenician elements, we can understand it attracting the fierce wrath of the Carthaginian general. Selinuntine territory had expanded, notably in the interior, during the fifth century B. C. ; this was a cause of serious preoccupation for the native and Punic population of the island. The passes which led from the south-west to Palermo through the mountains of Alcamò, of S. Giuseppe Iato and of Piana dei Greci were called ἡ Σελινουντία δυσχωρία (Diod. xxiii. 21).

If these historical and numismatic data are certain, we cannot admit, in my opinion, that the activity of the mint of Segesta continued after 409. In the territory over which the ἐπικράτεια extended, with the exception of the didrachm of Solus already mentioned, no other mints were allowed after this year, except those of Panormus and Motya, where a large number of Segestan didrachms were restruck and some female heads were engraved which do not appear in the series of coins of Segesta. Such were the female head with loose hair on the tetradrachm and didrachm of Panormus and on didrachms of Motya, the female head with hair bound several times with ribbon, and the female head facing (Motya) copied from the well-known type of Arethusa, and also the other on a rare tetradrachm of Motya imitating the female head of one of the decadrachms of Kimon.

All these coins, to which we should add the numerous didrachms of Panormus with the dog,⁴ are to be assigned

⁴ I think that some didrachms of Segestan type, uninscribed,

to the last five years of the fifth century and to the early years of the fourth, and formed the bulk of the silver money which Panormus and Motya put into circulation in the area subject to the Carthaginians.

But these are not the only numismatic data which this historical period, full of turbulent happenings, gives us to study. The exodus of the citizens of Selinus and Himera, who were able to escape slaughter, had as a result that a considerable number of silver coins, struck in the name of these two cities, were used for the daily needs of the refugees. From this abnormal state of affairs arose the necessity of placing upon the Himeraean *litrae* countermarks to give them legal course in the new settlement of *Thermae Selinuntiae*; and this is also the explanation of the countermark on the Selinuntine *litra*, probably impressed in the new foundation of *Thermae Himerenses*.

This complete financial disorganization in the area of Sicily subject to Carthage had gradually to come to an end, and even if we allow that the series of Siculo-Punic coins had begun in 410, I believe the great issue of these coins took place a little later.

The very serious military commitments of Carthage and the uncertainties of a war so full of danger excluded the possibility of a reorganization of the mints, which would have required to be part of a system of measures of an administrative character. The representative of Carthage could not proceed to this reorganization of the mints before the year 404 in which arms were laid down. The great issue of

should be attributed to Panormus. The *didrachms*, often restruck, which have the ivy leaf, are certainly of this period.

Siculo-Punic coins began therefore in this year and particularly in 397, when the war resumed by Dionysius with such vigour put Carthage to the necessity of strenuously defending her possessions in the island. This interesting series of coins, which are all tetradrachms, begins with specimens reproducing the female head on the decadrachm of Cimon (Hirsch, iv, 290) with which the activity of the mint of Motya closes (Hirsch, iv, 281), and the female head of the unsigned Syracusan coins (Hirsch, iv, 283, 396; Hill, *Coins of Ancient Sicily*, Pl. VII. 3). Then follows the numerous series of heads derived from the decadrachms of Euainetos and from other Syracusan originals of the fourth century. Among the last of its issues are the rare specimens with the bearded head derived from the tetradrachms of Philip (Hill, *op. cit.*, Pl. IX. 16 = Head, *Hist. Num.*², p. 223, fig. 136) and with the head of Heracles copied from the tetradrachms of Alexander the Great.

Of the Siculo-Punic tetradrachms in the Palermo cabinet the following three appear to me worthy of note:—

1. *Obv.* Head of nymph to right with ear-rings and necklace; three dolphins around (the fourth behind the head is off the flan).

Rev. A swift quadriga to left with charioteer holding whip and being crowned by Nike; the Punic legend in the exergue has partly disappeared; in front of the charioteer the sign of Baal; circle of dots.

At; 27-25 mm.; 16.31 grms.; tetradrachm.

Palermo Museum. *Giornale*, 540.

The female head, not well struck up at the back and with a facial profile unusual in this series, has the hair arranged as in some of the latest signed tetra-

drachms. The quadriga shows an arrangement of the heads of the horses which is quite original; the two ὑποζύγιοι have the head turned towards one another, the two σείρῃοι turn their heads outwards. A similar arrangement of the heads is seen on the tetradrachms of Segesta (Hirsch, xix, 228, 229) and on the Syracusan tetradrachm by Parmenides and Eucleidas (Naville, iv, 371; Pozzi, 619; Hirsch, xxxiv, 200, 201). The sign of Baal is common to a number of Siculo-Punic coins (Landolina-Paternò, *Ricerche Numismatiche*, Pl. IX. 13; Head, *Coins of the Ancients*, Pl. XXXV. 38; Hill, *op. cit.*, pp. 145, 146, Pl. X. 9; Holm, *Sic. Münzw.*, nos. 267 and 734; *Weber Catalogue*, Pl. 86, no. 1476).

2. *Obv.* Female head to right with four dolphins around.

Rev. A swift quadriga to left with charioteer bending forward and being crowned by Nike; in exergue *Ziz.*

Æ; 28-26 mm.; 17.14 grms.; tetradrachm.

Palermo Museum.

The vigour of the two right-hand horses and the pose of the charioteer are admirable in this quadriga. I have not found a parallel for the movement of the horses. A similar specimen appeared in the Naville Sale, iv, no. 287.

3. *Obv.* Female head to left with ear-rings and necklace; behind, a fish; below, a letter(?); border of dots.

Rev. Quadriga with charioteer crowned by Nike; in the exergue *resh melqarth.*

Æ; 24 mm.; 16.96 grms.; tetradrachm.

Palermo Museum. *Giornale*, 1053.

The quadriga in the pose of the horses recalls that of the decadrachms of Euaenetos. A similar specimen

was in the Hirsch Sale, xxxiv, no. 155. Both are very similar to the tetradrachm, Hill, *op. cit.*, Pl. X. 1.

GELA.

Obv. Female head to right (personification of law and order) with sphendone, ear-rings, and necklace; in front, ΕΥΝΟΜΙΑ

Rev. Human-headed bull to right below ear of corn; around, ΓΕ ΛΩΙ ΩΝ

Æ; 11 mm.; 0.75 grm.; diobol.

Palermo Museum.

[Pl. V. 8.]

IMACHARA.

Obv. Female head to right with ear-rings and necklace; in front, ΙΜ[ΛΧ]ΑΡΑΙ; behind, ΩΝ; border of dots.

Rev. Bull charging to right.

Æ; 11 mm.; 76 grms.; diobol.

Pennisi di Acireale⁵ collection.

[Pl. V. 7.]

This piece of late style is not far distant in time from the coins of the Roman period, and shows a great affinity with coins of Tauromenium, Tyndaris, and Centuripae. We do not know the site of this city, which must have lain in the region to the south of the Nebrodi mountains. Its inhabitants were the Imacharenses mentioned by Cicero (*In Verr.*, iii. 18, 42) and by Pliny (*N. H.*, iii. 8, 14); Holm, *op. cit.*, i, p. 361; Salinas, *Il caduceo degli Imacaresi*, Palermo, 1879.

This little coin adds the town of Imachara to the number of towns of ancient Sicily which struck coins.

⁵ I have to thank the noble owner, the late Baron Pennisi di Floristella, for allowing me to publish this unique coin.

HALAESA.

Obv. Female head to right with ear-rings; in front
ΑΛΛΙΣΑ[Σ]

Rev. Heracles fighting with bow in left hand and club in raised right, his head is covered with the lion's skin which falls down behind his shoulders and on his left arm.

Æ; 24 mm.; 16.90 grms.; hemilitron.

Restruck on a coin of Syracuse with head of Zeus and thunderbolt.
[Pl. V. 11.]

I know three specimens of this coin: one in the Museum of Palermo, worn and with legend gone (wt. 15.08, Gabrici, *Monetaz. del Bronzo*, p. 205, no. 16); a second (wt. 16.90) in a private collection, the obverse of which is here illustrated [Pl. V. 11 a]; and the third is also in a private collection (wt. 13.25 grms.), the reverse of which is here illustrated [Pl. V. 11 b].

The female head resembles that of the coins with legend *symmachikon* (Holm, *Gesch. Sic. Münzw.*, Pl. VII. 10; Hill, *op. cit.*, Pl. XII. 22; Gabrici, *op. cit.*, Pl. III. 18). The figure of Heracles fighting, which recalls a type much in vogue in Greek sculpture and vases, has a symbolic significance on this coin, and it is not impossible that it reproduces some original piece of sculpture at Halaesa.

CRIMISSA.

Obv. Female head to right with ear-rings and necklace; luxuriant hair on the neck; in front, ΟΜΟΝ[οια]

Rev. Lighted altar with flames, ornamented at the corners; it is garlanded with branches of laurel and has an upright branch on either side; on left
[K]ΠΙΜΙΞ; below, ΞΑΙΩΝ

AR; 15-13 mm.; 1.78 grms.

Palermo Museum.

The obverse of this coin comes from the same die as the coin published by Sir Arthur Evans (*Contribut.*, ii, Pl. IX. 13) and Hill (*op. cit.*, Pl. XIII. 2). The reverse is from a different die, and on it can be clearly read the inscription *Κρίμισσάων*, which gives us the ethnic of the citizens of *Κρίμισσα*. The ingenious interpretation given to this legend, in which it was thought the name of the river *Κρίμισος* was to be recognized, thus falls to the ground.

A city of Krimissa in Lucania is mentioned by Strabo (vi. 254 and *passim*), and by Lycophron (*Alex.* 313). A female head, a personification of Homonoia (**ΗΜΟΝΟΙΑ**), is found on coins of Metapontum (*B.M.C.*, p. 244, no. 89), and with the legend **ΟΜΟΝΟΙΑ** on late bronze coins of Panormus (Holm, *op. cit.*, p. 714; Gabrici, *op. cit.*, Panormus, nos. 5-7).

LIBYES.

1. *Obv.* Laureate head of Zeus to right; behind, Ψ; in front, [Λ]Ι[ΒΥ]ΩΝ; border of dots.

Rev. Bull running to right; above, Ψ; below, between its hind legs, the letter Α; in the exergue ΛΙΒΥΩΝ; border of dots.

Α; 28 mm.; 12.05 grms.

[Pl. V. 12.]

Palermo Museum.

On the back of the bull, where the Phoenician letter is, are traces of the tail of a horse from an earlier type, on the obverse traces of the earlier die appear along the profile of the nose and on the nose itself.

2. *Obv.* Similar, but from a different die; the legend of the obverse is well preserved.

Rev. On the exergue the legend is [Λ]ΙΒΥΩΝ

Clear traces of earlier striking.

Α; 28 mm.; 12.13 grms.

Palermo Museum.

3. Similar; on the face of Zeus traces may be seen of the hind part of a horse.

R; 28 mm.; 11.97 grms.

4. Similar; the head of Zeus is on a smaller scale than on the preceding; between the hind legs of the bull it is not certain whether the letter is A or Δ. Before the face of Zeus is clearly seen the outline of the head of a horse.

R; 28 mm.; 12.07 grms.

5. Similar, and certainly restruck.

R; 28 mm.; 12.25 grms.

6. *Obv.* Head of Zeus to left; in front, ΑΙΒΥΩΝ; behind, Ψ; border of dots.

Rev. Bull charging to left; above, Ψ; between its hind legs A.

R; 28 mm.; 11.88 grms.

[Pl. V. 13.]

On the obverse traces of restriking can be seen; on the rump of the bull can clearly be seen the outline of a human head from an earlier striking.

7. Similar, with clear traces of restriking.

In all there are nine coins, two of which are too oxidized for description here; they were discovered at Selinus by Cavallari in 1874 among the materials accumulated in front of the eastern face of the temple D. They were first mentioned by Cavallari,⁶ then by Holm.⁷ A specimen similar to the coins cited was described by Mionnet (vi. 553, no. 4), but since the nine coins discovered at Selinus never had the honour

⁶ *Bullett. della Commissione di antichità di Sicilia*, no. 7, 1874, p. 18.

⁷ *Arch. Zeitung. N. F.*, vol. vii, 1874. This article was translated with notes by Cavallari in *Archivio storico Siciliano*, iii, fasc. 3, 4.

of being illustrated they may well be said to be unpublished. The head of Zeus may be derived from that of the bronze coins which were in circulation in Egypt in the time of the first Ptolemies, in fact, their style is appropriate to the end of the third century B. C. The place of issue is unknown; it should be sought in the northern district of Libya in the vicinity of the coast, where the Greek element was mixed with the Phoenician, as we see from the use of Phoenician letters in combination with the Greek legend. H. Müller mentions coins of bronze with the same legend *Αιβύων*, which he assigns to the people of the Macae.⁸

Palermo, June 1929.

ETTORE GABRIEL.

⁸ Müller, *Numismatique de l'ancienne Afrique*, i, p. 132; Head, *Hist. Num.*, pp. 874 ff.

VII

THE PORTRAIT MEDALS AND ZODIACAL COINS OF THE EMPEROR JAHĀNGĪR.

(Continued from *Num. Chron.*, 1929, p. 25.)

II. THE ZODIACAL COINS.

[SEE PLATES VII-X.]

It was my intention to give an account of all zodiacal pieces to which I have had access, together with an adequate bibliography, but I found that this would much exceed the limits of a paper: I have confined the material to that sufficient for description and discussion.

In the first part of this paper I have described the circumstances under which a Muhammadan ruler came to issue money bearing such prohibited designs as a portrait and signs of the zodiac. Briefly, Akbar, the Great Mughal, had deserted Islām and set up a new universal religion, the Dīn Ilāhī or Divine Faith; the promulgation of this creed was followed by the establishment of the Ilāhī Era. The Ilāhī was a true solar year, and this Solar Era counted from the Nauroz (New Year's Day), or day of the sun's entrance into Aries of the year of Akbar's accession—A.D. 1556, 963 A.H. Persian names were given to the months and days. Akbar died at Agra in October, 1605, and was succeeded by his son prince Salīm under the names or titles of Nūru-d-dīn Jahāngīr, "the Light of the Faith, the World-seizer". Jahāngīr abandoned Akbar's Ilāhī Era and Faith, but preserved the solar

computation with use of the Ilāhī months. The regnal year was reckoned from one vernal equinox to the next, and the coins are dated by the regnal year with or without the Hijra year. Though he professed great devotion to his patron saint, Khawāja Mu'īnu-d-dīn Chishtī of Ajmer, the emperor was so lax in religious matters that some authorities call him an atheist. So it is not surprising that, in spite of the Prophet's denunciation, Jahāngīr struck portrait medals and zodiacal coins. I understand that the only other money exhibiting all twelve signs of the zodiac is an issue of Antoninus Pius from the mint of Alexandria. It is interesting to note that Amānullah, the late Amir of Afghanistan, among other innovations decreed an official solar year in place of the lunar Hijra year—a reform recently introduced into Persia by the Rizā Shah Pahlewi. The names of the months were those of the twelve zodiacal signs, and the year began at the vernal equinox—*J.A.S.B.*, 1928, p. 419.

I have had great help in the preparation of this paper from the Keeper of the Coins, British Museum. I also wish to express my obligations to the Directors of the Coin Cabinets at Berlin, Paris, Vienna, Gotha, and Leningrad, to the Keeper of the Hunterian Collection, Glasgow, to the Governing Body, Christ Church, Oxford, and to the Curator, American Numismatic Society, New York.

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B.M. Cat. = Catalogue of Indian Coins in the British Museum. The Moghul Emperors, 1892.

P.M. Cat. = Panjab Museum Catalogue. Vol. ii. Oxford, 1914.

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J.A.S.B. = Journal of the Asiatic Society of Bengal.

A.H. = Hijra Year. The Hijra Era commences in A.D. 622, and the year is lunar.

R. Y. = Regnal Year, which coincides with the Ilāhī Year. For further information see *Mem.*, Essay II, The Ilāhī Era.

W. = weight in grains.

S. = size in inches.

Months of the Ilāhī Year are :—

- | | |
|----------------|-----------------|
| 1. Farwardīn. | 7. Mihr |
| 2. Ardībihisht | 8. Ābān |
| 3. Khūrdād | 9. Āzar |
| 4. Tīr | 10. Dī |
| 5. Amardād | 11. Bahman. |
| 6. Shahrewar | 12. Isfandārmuz |

Jean-Baptiste Tavernier, jeweller and traveller, was born in Paris in the year 1605. He made six voyages to the East. During his second voyage he was at Agra, probably in the winter of A.D. 1640-41, thirteen years after Jahāngīr's death; he visited Ahmadabad about the end of 1642. Tavernier's *Travels* appeared in English in 1684.¹ In the first book of the Indian travels he narrates that Nūr Jahān,² known at Court as Nūr Mahall,³ wife of Jahāngīr, was a woman of sublime wit, and had such an ascendancy over the king that he could not live without her. She was the enemy of his two sons, especially of the second, Sultān Khurram, afterwards Shāh Jahān, while Khurram on his part opposed all her designs. This queen,

¹ Tavernier's *Travels*. Made English by J. P. London, 1684. First Book of Indian Travels, pp. 10f.

² Light of the World.

³ Light of the Seraglio.

to perpetuate her memory, planned an issue of coin of unique design, with her own name on one side and a sign of the zodiac on the other. She bided her time till the eldest son (Khusrū) had been blinded for rebellion and the next one (Khurram), "the most potent and most inveterate of all her enemies", sent on a military expedition to the Dekkan. Then one day she persuaded the king to make her ruler in his stead for the space of twenty-four hours. The queen had completed her preparations: bullion had been set aside in the mint cities, and she had distributed the dies. Messengers were despatched commanding the mint masters to coin "rupees of gold and silver" on the appointed day to the value of "two millions". Within two hours of her enthronement she caused quantities of that gold and silver to be thrown among the people. The queen's implacable enemy, Sultān Khurram, on hearing the news became senseless with rage. When he succeeded to the throne on the death of Jahāngīr, he forbade the use of those rupees on pain of death, and ordered that all should be withdrawn from circulation and melted down. "For this reason they are at present very rare, particularly those in gold; among the rest, two or three of them are so hard to be found that an hundred crowns has been given for one of them . . . The queen during her reign of twenty-four hours had that respect for the king that on the reverse side of the zodiacal pieces she caused the name of Jahāngīr to be stamped with her own, and the name of the place where they were coined." Tavernier has a Plate of these coins.

In a narrative of military operations against Tippoo, published in 1794, Lieutenant Edward Moor has an

illustrated appendix on zodiacal rupees.⁴ The author first quotes Tavernier, and later Tychsen.⁵ The gist of his remarks is that Tavernier ought to be a good authority, but the representations in his Plate do not resemble any known zodiacal coin, and were probably drawn from memory; the inscriptions cannot be deciphered. "The queen's name we never saw on these coins, nor do any positive proofs exist of her being the cause of the impressions: tradition, however, uncontradictedly allows her the honour . . . Tavernier could have no reason for wishing to impose upon his readers, although his readers may see reason to fear he was himself imposed upon." The author then reproduces descriptions of coins from Tychsen.

Tychsen had pointed out that Tavernier's tale is flatly contradicted by the fact that coins exist of different years. On all the Adler rupees at Berlin the inscription is uniformly the same. As an example, Tychsen gives the usual Persian couplet as found on a Ram piece of Agra mint, date 1032 A.H. He notes that Capellus "in Rarioribus Beccelerianis", Hamburg, 1684, illustrated all twelve signs in two Plates. On the gold coin of Aquarius is a legend different from the rest:

بادشاه غازى جهانگیر ضرب اجمیر ۱۰۳۲

A gold Scorpio also differs from the others.⁶ Tychsen

⁴ *A Narrative of the Operations of Captain Little's Detachment, &c.*, by Edward Moor. London, 1794. The word rupees signifies pieces because the author, like Tavernier, speaks of gold and silver rupees.

⁵ Olaus Gerhardus Tychsen, *Introductio in Rem Numariam Muhammedanorum*. Rostochii. 1794.

⁶ It is the Lahore Scorpio at Leningrad.

then mentions the Tavernier rupees "rather inaccurately cut in wood".

Edward Moor has a drawing and description of a set of "zodiac rupees". He says that the pieces were collected by a Mr. William Ashburner of Bombay. "The drawings were made with great care and fidelity, and may be called, as may also those of Tippoo's coins, exact portraits." If this be the case, the coins are so poor and so inferior to those of Tippoo, instead of being at least as fine, that I can only conclude Moor took the trouble to draw and describe a set of blatant forgeries. The coins are presumably gold. If so, the Aries is an imitation in that metal of the normal Ahmadabad silver piece. The rest, all of Agra mint, do not merit serious discussion: the Virgo is the notorious "winged dancing girl" fake. Moor says that the legends of the Aries and Bull are different from those of any other zodiacal coins he had ever seen, yet the former is the usual silver Ahmadabad inscription, and the latter the normal *Zinat zar* reading found on the Agra gold coin with Bull to left. An item of information from the same source is that Mr. Knight, of Whitehall, "purchased at an auction in Paris a collection of the zodiac rupees for a trifle more than their weight in gold: so little is the value of these medals known". From Edward Moor's notes on these pieces, it is clear that they are the splendid Payne Knight gold zodiacal coins in the British Museum.⁷

⁷ Moor gives the sign and date of each coin, fifteen in all. There is a complete set, together with an extra Leo (lion to left), an additional Scorpio, and a portrait medal (king with wine cup: 1020, 6).

Lieutenant Moor remarks that the "zodiac rupees" being very rare, are consequently prized. In the *Bombay Gazettes* of July, 1790, a set in gold was advertised for sale at Rs. 2,500,⁸ which price he believed they fetched. "The silver are more prized than the gold rupees, which we may suppose to be caused by the superior intrinsic value of the one having been the means of preserving a greater number. We have reason to suppose that there are other sets of the zodiac rupees in England besides those here noticed. We have information of seven sets in Holland, but have doubts of their originality. Virgo and Aquarius are said to be the rarest."

Lord Valentia has something to say about zodiacal coins.⁹ On March 13, 1803, at Benares, "I procured from a banker one of the Zodiac mohurs, which are now so extremely rare that it is almost impossible to procure a complete set". In an appendix¹⁰ there is "some account of the gold medals said, erroneously, by Tavernier and other Writers to have been coined in one day by Nur Jehan Begum, Queen of Jehangir; communicated in a letter from Major Gore Ouseley".

"The tradition of their having been coined by Nur Jehan Begum, the Queen of Jehangir, is preposterous in itself, and totally discredited by all the natives of science and research I have ever had the opportunity of conversing with on the subject. It is supposed by the more enlightened natives that the Emperor, on the celebration of the anniversary of his birth or

⁸ £312 10s. with the rupee at 2s. 6d.

⁹ George, Viscount Valentia, *Voyages and Travels to India, Ceylon, &c.* 4 vols. London, 1809, i, p. 120.

¹⁰ *Ibid.*, p. 472.

reign, ordered medals to be struck with the sign of the zodiac in which the sun was when such anniversary occurred, which his long reign, and the difference of solar and lunar years, would easily have allowed to pass through the whole number. I am persuaded that they were medals, and not a coin for current purposes. Annexed is the inscription in verse, as it should be read. All that I have ever seen have been struck at Agra:

یافت در آگره روی زر زینور
از جهانگیر شاه شاه اکبر

"The following is a translation:

The face of gold received ornament in Agra,
From (the name of) Jehangir Shah, the son of King
Acber."

James Forbes went out in the East India Company's service in the year 1765, and subsequently wrote four volumes of *Oriental Memoirs*.¹¹ On page 432 of the third volume we read: "Among some curiosities at Surat I had an opportunity of seeing a few more of the zodiac rupees in good preservation, but could not meet with any for sale. When these singular coins occurred on a former occasion, I had not read Lord Valentia's *Travels*, otherwise I might have acquired some light from a note in the Appendix."

In March, 1787, Claud Martin (of La Martinière fame) forwarded some zodiacal coins for Lord Cornwallis with the following letter to Colonel Alex. Ross, the Military Secretary:¹² "On this lucky day let me

¹¹ James Forbes, *Oriental Memoirs*, 4 vols. London, 1813.

¹² India Office Records, Home Series, Misc. 741. I am indebted for this reference to Mr. T. G. P. Spear, St. Stephen's College, Delhi. *Nazer*, نذر, is the gift offered to a superior.

request you would present my humble Nazer to his Lordship with these improcurable coins. They are of a sort which his Lordship may remain twenty year in India and may not be perhaps able to collect such a number. They were struck by the famous Nourjean Begum."

Colonel Gentil was French resident at the Court of Oudh in the time of the Nawab Shujā 'u-d-daula, who died in 1775. His memoirs contain an adequate notice of the zodiacal coins.¹³ This author states that they were issued regularly from 1018 A.H., Jahāngīr's fourth year, till the end of the reign. "The emperor ordered that the coins of each year were to bear the zodiacal sign appropriate to the anniversary of his coronation. This sign would change because the Muhammadan year is lunar, and shorter than the solar year." The explanation is ingenious but no more correct than that of Lord Valentia. The difference between the solar and the lunar year is ten and a fraction days, so the anniversary would require some thirty-three years to complete its recession through the twelve celestial houses; Jahāngīr reigned twenty-three lunar years. Also the issue of zodiacal pieces did not commence till 1027 A.H., and the official regnal years are solar, not lunar.

Tavernier cannot have made an intelligent inspection of the zodiacal coins, and his plate is poor and inaccurate. The gossiping goldsmith has perpetuated a romantic story based on the folk-lore theme of "What I should do if I were king for a day", and having for its heroine that brilliant woman Nūr Jahān.

¹³ *Mémoires sur l'Indostan*. M. Gentil. Paris, 1822, pp. 352 f.

Jahāngīr fell completely under her spell from the day he married her, and she with her father and brother were the real rulers of the empire till his death. Artistic, capable, beautiful, endowed with unbounded energy and ambition, no Muslim woman ever occupied the stage so magnificently. She designed dresses, brocades, tapestries, and ornaments. She came forth boldly from the harem, rode upon an elephant, could kill a tiger at the first shot, or appear with bow and quiver in a skirmish.¹⁴ On her elevation she promoted her family and numerous relations; in pursuance of this policy Prince Khurram was married to the daughter of Āṣaf Khān, brother of Nūr Jahān.¹⁵ Yet Khurram detested her usurpation of the imperial power, which not only made him her enemy, but also alienated him from his father. Nūr Jahān sensed his strength and capacity, and knew that her influence would vanish at his accession, so did all she could to foster bad relations between Shāh Jahān and the emperor and to promote the interests of the incapable younger brother Shahryār. So these facts accord with Tavernier's story, Nūr Jahān's unlimited influence over her husband, and Khurram's enmity. It is also true that Khurram was sent on a military expedition to the Dekkan. He left the emperor at Ajmer "for the conquest of the provinces of the Dekkan" on the 8th Ābān, R. Y. 11, and returned to Jahāngīr at Mandu

¹⁴ One thousand gold pieces were showered over her head for killing four tigers with six shots. *Tūzūk*, vol. i, p. 375.

¹⁵ The name of this lady was Arjmand Bānu Begam. As favourite queen of Shāh Jahān she was styled Mumtāz Mahall and her mausoleum is called the Tāj Mahal, a corruption of this title.

early in year 12 after a victorious campaign. The emperor bestowed on him the name or title *Shāh Jahān*. There is in addition the historical fact that the coins bearing *Nūr Jahān*'s name were withdrawn from circulation on the death of *Jahāngīr*. Mr. S. H. Hodivala has drawn attention to a letter addressed to the President and Council of Surat by the factors at Agra on the 17th February, 1628, in which we read "All rupees of Noor Jehann Beagam's stampe are called in and not to bee uttered". As *Shāh Jahān* formally ascended the throne on the 14th February, 1628, he lost no time in issuing the order.¹⁶ But it was very exceptional for a zodiacal piece to bear *Nūr Jahān*'s name.¹⁷

There is no need to speculate further on the origin of the zodiacal coins because *Jahāngīr* himself claims all the credit for them.¹⁸ On the 23rd day of the *Ilāhī* month *Farwardīn*, the first month of the solar and regnal year 13, the emperor's camp was close to *Ahmadabad*, the capital of the Province of *Gujarat*, and *Jahāngīr* had decided to sojourn in that splendid city. The imperial diarist writes: "Previously to this, the rule of coinage was that on one face of the

¹⁶ *Mem.*, p. 318.

¹⁷ On the other hand there was an abundant issue of coin from several mints with a Persian couplet containing her name as well as that of the emperor.

¹⁸ *Jahāngīr* took a great personal interest in the coinage. Yet in spite of his claim I think that *Nūr Jahān* was the instigator. The zodiacal pieces which bear her name are usually of outstanding design. I am also prepared to believe that *Shāh Jahān*, who was a stricter Muslim than his father, took measures against all the zodiacal coins indiscriminately. The minting of zodiacal pieces at *Ahmadabad* ceased abruptly when he became governor of that city.

metal they stamped my name, and on the reverse the name of the place, and the month and year of the reign. At this time it entered my mind that in place of the month they should substitute the figure of the constellation which belonged to that month; for instance, in the month of Farwardīn the figure of a ram, and in Ardībihisht the figure of a bull. Similarly, in each month that a coin was struck, the figure of the constellation was to be on one face, as if the sun were emerging from it. This usage is my own, and has never been practised until now.”¹⁹

The statement is explicit, and contains an excellent condensed description of the coins. The Ilāhī year was a true solar year, and the Ilāhī months corresponded pretty accurately with the sun's duration in the respective celestial houses. Astronomers were regarded as necessary members of the imperial retinue, and the day and hour of the sun's passage over the first point of Aries was calculated to a nicety. Jahāngīr begins each section of his *Memoirs* on the Ilāhī New Year's Day. “The determination of the four seasons, the exact calculation of the solar month, the determination of the land-revenue assignments and cash allowances of the troops and artillery, and the selection of the auspicious moments for doing things were all regulated by reference to the astronomers' almanacks.”²⁰

The New Year's Day of the regnal year 13 was the day on which the sun entered Aries (the Ram), the first of the Ilāhī month Farwardīn, corresponding with

¹⁹ *Tūzūk-i Jahāngīrī*, vol. ii, p. 6.

²⁰ *Mem.* The Ilāhī Era, p. 31.

the 23rd of the third month of the Hijra year 1027 and with March 20th, A.D. 1618. Jahāngīr decreed the issue of the zodiacal coins outside Ahmadabad on the 23rd Farwardīn while the sun was still in the constellation Aries. The emperor made his state entry into the city when the sun had been seven days in Taurus. In the fifth Ilāhī month, Amardād, preparations were made to leave, and the advance camp was started towards Agra on the 7th Shahrewar, the sixth Ilāhī month.²¹ It is precisely to the first five months of the regnal year 13, Hijra year 1027, that the zodiacal coins of Ahmadabad mint belong. The metal is silver, and the signs are Aries, Taurus, Gemini, Cancer, and Leo.²² Why did the zodiacal issue cease abruptly with Jahāngīr's departure? Were coins of so unique and personal a character only struck at places while the emperor was actually residing in them? I believe this was a factor governing the occasional striking at the rarer mints, but it does not hold for the zodiacal money struck at the capital, Agra. It may be that the Ahmadabad issues automatically ceased when Jahāngīr left the place.²³ But I can indicate another reason which I suggest is of itself a sufficient explanation. Jahāngīr before his departure appointed Shāh Jahān, the conqueror of the Dekkan, as viceroy of Gujarat and governor of Ahmadabad.

From 1025 to 1027 A.H. the governor of Ahmadabad was Muḥarrab Khān, a surgeon whose preferment to administrative office was due to his having effected

²¹ *Tūzūk*, vol. ii, pp. 6-25.

²² This statement covers all but one or two anomalous pieces.

²³ Jahāngīr never revisited Ahmadabad.

a cure of the emperor Akbar. It was the same officer who, while Nawab of Surat, had maltreated William Finch, and had shown an unfriendly disposition towards Sir Thomas Roe. On the eve of Jahāngīr's departure for Agra the emperor, recognizing the inefficiency of the quondam barber, appointed Shāh Jahān as viceroy. The latter's term of office covered the years 1027 to 1031 A.H. I have shown reason to hold that Shāh Jahān was hostile to the zodiacal idea. If he vetoed the celestial coinage, then he remained viceroy long enough to make his veto effective. By the early part of 1034 A.H. the emperor had wearied of his new toy, and a few desultory pieces appear from the Panjab and Kashmir between then and 1037, the year of Jahāngīr's death.

The main camp started for Agra on the 21st Shahre-war (sixth month), year 13, 1027 A.H., and arrived in the environs of Fathpur Sikri on the 19th day of Dī, the tenth Ilāhī month, or about the 22nd Muḥarram, 1028 A.H. (end of December A.D. 1618). Plague had broken out at Agra, so the emperor remained at Fathpur three months. He entered Agra on the 1st Ardībihisht (second Ilāhī month), year 14.²⁴ Zodiacal coins were struck at Fathpur mint while Jahāngīr was actually there. The earliest known zodiacal coin of Agra mint bears the sign Pisces, and date 1028, 13: that is to say, it was struck in Isfandārmuz, the twelfth month of regnal year 13, while Jahāngīr still tarried at Fathpur. Fathpur was only twenty-three miles distant from Agra, so the emperor was within striking distance of his capital and could decree the issue of zodiacal

²⁴ *Tūzuk*, vol. ii, pp. 25-84.

money from that city at his royal pleasure. The latest zodiacal piece of Agra mint known to me was struck when the sun was in Aquarius (eleventh month) in year 19. I have notes of gold coins bearing nine signs of year 14; eleven of year 15; ten of year 16; ten of year 17; nine of year 18; and eight of year 19. The missing signs are:—year 14, 8, 11, 12; year 15, 12; year 16, 5, 12; year 17, 1, 11; year 18, 4, 5, 6; year 19, 1, 8, 9, 12. I see no reason to doubt that zodiacal pieces were struck at Agra in each month of this period, that is to say, from the twelfth month of year 13 (Pisces) to the eleventh of year 19 (Aquarius) inclusive, and Agra coins may be found of later months and years as well as pieces of the months still unrepresented within the period. The issue continued independently of Jahāngīr's presence in or absence from Agra.

About the sixth month of year 14 the emperor resolved to visit "the eternal spring of the rose-garden of Kashmir", and his camp started from Agra on the 24th Mihr (seventh month), the festival of the Dasahrā, which is the beginning of the cold weather. On the 11th Farwardīn, year 15—15th of the fourth month, A.H. 1029: 20th March, A.D. 1620—Jahāngīr arrived at the Dal Lake near Srinagar, the capital of Kashmir.²⁵ While he was in Kashmir a silver zodiacal coin appeared of Kashmir mint, sign Gemini (third month), regnal year 15, 1029 A.H. The march out of the happy valley began about the 1st Mihr, and the imperial camp reached Lahore on the 9th Āzar (ninth month), year 15: 5th Muḥarram, 1030 A.H.: 20th November, A.D. 1620. The emperor stayed there a month, and his visit was not signalized by the issue of

²⁵ And designated Kashmir on the coins.

zodiacal money; at any rate no Lahore piece of year 15, 1030, has yet come to light. Jahāngīr marched for Agra on the 4th Dī, and after a journey of seventy days entered the capital on the 14th Isfandārmuz, year 15. He had been absent sixteen months, and of this period thirteen months are represented by zodiacal gold pieces of Agra mint in our collections.

Jahāngīr ceased to keep his diary in person late in his 17th year, a symptom of waning vitality. For the next twelve months he was harassed by Shāh Jahān's rebellion. The defeat of his undutiful son left the emperor free to go to his beloved Kashmir for two successive summers. But with health sapped by his unrestrained and convivial habits, and happiness dimmed by domestic and political troubles, his powers were failing fast. It was just in these last years that scarce zodiacal coins issued from the Camp mint (Urdu), Kashmir, and Lahore. The mints of Lahore and Kashmir are associated in these closing years with Nūr Jahān. Jahāngīr died in camp in the foothills while returning from a final visit to Kashmir. The date of his death was 15 Ābān, year 22: 28 Šafar, 1037 A.H.: 7th November, 1627, and his age was fifty-eight.

The portrait pieces were medals and the zodiacal issues coin of the realm. As regards the designs I will merely say that though they owe something to Western models, there is no need to assume that any one of them is the work of a European artist. Jahāngīr was an enthusiastic patron of art, an assiduous collector of paintings and illuminated manuscripts; embassies were instructed to include such objects among the treasures they brought back from foreign

courts. In the second volume of the emperor's *Memoirs* is a description of the royal gallery "adorned with pictures by master hands". The court painters were employed to make pictorial records of current events. Jahāngīr sent some of his painters to copy the whole ornamentation of the Jesuit church at Lahore in order to have it depicted and described in his chronicles—*J.A.S.B.*, 1927, p. 152. So it is quite probable that Virgo is a copy of a Western angel by an Eastern artist, and possibly the very picture could be identified in the galleries of Europe.

The zodiacal coins conform in weight and size to the ordinary coin of the realm current during the last ten years of Jahāngīr's reign. The gold piece weighs 168 grains, and usually measures 0.8–0.85 inches; the weight of the silver rupee is about 176 grains, and its size 0.75–0.8 inches. A few half pieces are known in silver; none in gold. The legend is usually a Persian couplet.

Nearly all the zodiacal coins were struck at two famous mints—Agra, the metropolis of the Mughal Empire in Jahāngīr's reign, and Ahmadabad, a splendid city which was the capital of the Province of Gujarat in Western India. Some twenty-five pieces are known of Ajmer, Urdu (Camp), Fathpur, Kashmir, and Lahore mints. The name of Nūr Jahān occurs on only half a dozen coins struck at Kashmir and Lahore. As a general rule the Agra coins are gold and the Ahmadabad issues silver. I know of only one gold coin of Ahmadabad which may be authentic. On the other hand there are a number of silver coins of Agra mint which I think undoubtedly genuine. They are of correct weight and are beautifully struck.

I have examined 243 gold coins of Agra mint. Their classification is as follows:—Aries, 22; Taurus, 35; Gemini, 21; Cancer, 16; Leo, 14; Virgo, 13; Libra, 25; Scorpio, 19; Sagittarius, 18; Capricornus, 29; Aquarius, 5; Pisces, 26. Aquarius is by far the rarest sign. Virgo comes next, closely followed by Leo and Cancer. Even the few existing Aquarius coins do not inspire confidence. The design of four specimens is the crude figure seated on a water-skin; sun and rays are absent. But this is the design on which the forgeries are based, and it is also that of the earliest gold issue, the Aquarius of Fathpur. As far as the legend goes I would say that the Aquarius coin (*B. M. Cat.*, 356) of 1032, 18, is genuine, yet the date is wrong, that is to say, the eleventh month of year 18 is in year 1033, not 1032. This elementary mistake occurs on quite a number of specimens which would otherwise be pronounced genuine. Mr. S. H. Hodi-vala has recently published a remarkable contribution on the zodiacal coins, written with his usual wealth of illustrative detail and fully-informed historical background.²⁶ The gist of his argument is that only those coins are certainly genuine on which both Regnal and Hijra dates are correct, and which were struck at a place where Jahāngīr was actually in residence. The dates certainly ought to correspond, yet I am loath to condemn coins which are otherwise satisfactory. The second criterion is not of a conclusive nature. As a rule coins only issued from the rare

²⁶ "The Chronology of the Zodiacal Coins", *J.A.S.B.*, 1928; *N.S.*, xli; *Num. Chron.*, 1929, pp. 296-309. This has been reviewed by E. von Zambaur, *Numismatische Zeitschrift*, pp. 193-5. Vienna, 1930.

mints when the emperor was visiting those places, but it does not follow that his presence was necessary for the striking of a zodiacal piece. I am convinced that these coins were struck at the capital, Agra, whether Jahāngir was in residence there or not. At the same time I am entirely in agreement with Mr. Hodivala, that it is valuable confirmatory evidence of genuineness if the dates of a piece show that it was struck at a place when the emperor was actually there. The point about the correspondence of Hijra and Regnal dates is straightforward. We are told that in year 13, 1027-8 A.H., the 1st Muḥarram, the Hijra New Year's Day, was three days before the end of the month Āzar, the ninth month, sign Sagittarius. I do not suppose that the Sagittarius coins of year 13 were necessarily struck on any particular day of that month. It follows that the pieces of the first eight months of year 13 must be dated 1027, those of the last three months will be of 1028, while the Sagittarius pieces can be 1027 or 1028. The 1st Muḥarram will retrogress eleven days each year. If we assume that Āzār, Ābān, and Mihr contain 29, 30 and 30 days respectively, the following table results²⁷ :—

<i>Regnal Year.</i>	<i>Hijra Year.</i>	<i>1st Muḥarram occurs in month.</i>
13	1027-1028	9 (Archer)
14	1028-1029	9 (")
15	1029-1030	9 (")
16	1030-1031	8 (Scorpio)
17	1031-1032	8 (")
18	1032-1033	8 (")
19	1033-1034	7 (Scales)

²⁷ See also Mr. Hodivala's table, *N.S.*, xli, p. 15 n.

There are coins of year 16, sign Scorpio, dated 1030 and 1031; similarly Libra pieces exist of year 19 of both 1033 and 1034. Pieces dated 16 preceding Scorpio should be of year 1030, and after Scorpio 1031; in 19 the critical month is Libra.

AJMER.

I illustrated a gold piece of Ajmer mint, sign Aquarius, date 1032, 18, in *P. M. Cat.*, Vol. II, Plate XXI, viii. It is in the Bibliothèque Nationale, Paris.

Obv.

Within circular border on
flowered field

۱۸ غاز
جہانگیر بادشاہ
۱۰۳۲
اجمیر
ضرب

Rev.

Contained as obverse,
within circle of rays, male
figure standing to r. and
pouring water out of a large
vessel.

N. [Pl. VII. 1.] Paris.

Another specimen at Leningrad has a similar reverse, probably from the same die, but the year ۱۰۳۲ is above جہا of جہانگیر, and I cannot see any regnal date. This piece was brought to Europe before 1684, as it is figured in a work by Capellus of that year. The Paris specimen was misdescribed by E. Drouin as of Ahmadabad mint—*Revue Numismatique*, 1902, p. 265. It is a fine coin, but the dates are not correct; the eleventh month of year 18 was in 1033, not 1032. The legend also occurs on a unique Virgo of Lahore mint.

Obv.

از جهانگیر
شاه
۱۸
شاه اکبر
شاه
با جمیر سکه ۱۰۳۳
زینت
زر

Rev.

Twins facing each other
and embracing; distinctive
in attitude and style.

N. [Pl. VII. 2.] Berlin.

This is a unique gold Gemini of Ajmer mint at Berlin; date 1033, 18. The coin appears to be perfectly genuine, but again the date is not correct; the third month of year 18 was in 1032, not 1033. The couplet is:—

Ba Ajmer shah sikka zinat i zar
As Jahāngir Shāh i Shāh Akbar.

At Ajmer the stamp became the ornament of gold,
Through Jahāngir Shāh, son of Shāh Akbar.

The Cancer mohur with the name of Nūr Jahān was described by J. Gibbs as of Ajmer mint; it really belongs to Kashmir, and is described below.

AHMADABAD.

The well-known silver zodiacs of Ahmadabad mint have been repeatedly described; I invite a reference to the British Museum and the Panjab Museum Catalogues. All the regular issues are dated 1027, 13 and are limited to the first five signs of the zodiac.

The Ram is the fat-tailed sheep; it sits to left with head on shoulder, and good specimens show two stars on its flank [Pl. VII. 4].

The vigorous design of the charging Bull [Pl. VII. 5] is much finer than the Taurus of the gold coins; there are stars on the hump. Two halves are known, at Berlin and Christ Church, Oxford [Pl. VII. 6].

The Gemini are chubby children in a crouching attitude with right arms uplifted, the one on the left facing to right; the other with back to the observer, head towards his companion, and left arm embracing him. The bodies are sown with stars. There is the same non-couplet legend as on the Ram and Bull coins [Pl. VII. 7]. I had a specimen without Hijra date; it is now in the British Museum.

Mr. E. W. Maunder sees in the Twins a male and a female—"The Zodiacal Coins of the Emperor Jahāngīr", *Knowledge*, July 1, 1899. This paper was inspired by a visit to Ahmadabad, an introduction to the Rev. G. P. Taylor, D.D., and an inspection of his coins. It was also the reading of an article by the Rev. G. P. Taylor entitled "Was Nur Jahan lady governor of Ahmadabad?" which gave E. Drouin the idea of examining and describing the zodiacal coins in the French National Collection—*Revue Numismatique*, 1902, p. 259. I may say that all Dr. Taylor's Mughal coins were eventually bought by myself, and are now in the British Museum with the rest of my Collection.

There may or may not be stars on the carapace of Cancer; a large star ornaments each side of the lower field. The legend is a rhyming Persian couplet which is repeated on the Leo issue. The word زبور "beauties, jewels" occurs in the forms زبور and زبور. A few superlative Crab pieces are known which bear

a couplet found also on ordinary rupees of Ahmadabad mint.

*Sikka zad dar Aḥmadābād az 'ināyāt i Ilāh
Shāh Nūru-d-dīn Jahāngīr ibn i Akbar bādshāh.*

Struck coin in Ahmadābād by the favours of God,
Shāh Nūru-d-dīn Jahāngīr, son of the emperor Akbar.

[Pl. VII. 8.]

Leo is always to the left; its shoulder, foreleg, and sides are sown with stars. There are two halves in the British Museum. The word زور is found as زور, زور, and زور—see also Dr. G. P. Taylor, *N. S.* v, p. 124. I share Dr. Taylor's surprise that the beautiful piece, *B. M. Cat.*, Pl. XI, 385, has been pilloried as a forgery [Pl. VII. 9, 10].

On a Leo or Cancer rupee in the British Museum the original design has been replaced by a crude Scorpio cut with a graving tool—*B. M. Cat.*, Pl. XI, 374 [Pl. VII. 11].

The silver Ahmadabad zodiacal issue is finely conceived and competently carried out. As an artistic achievement I prefer these coins to the gold issues of Agra. They are fairly abundant, except Gemini, and have not been imitated to any extent.

An abnormal gold coin of Ahmadabad mint was published and illustrated by Mr. Howland Wood in the *American Journal of Numismatics* for July, 1910. As the author remarks, it is very crudely done, but it may be genuine. The legend is merely the Leo and Cancer silver couplet stamped on a flan too small for it. The sign is Aquarius represented as a male figure running to left carrying a jar in both hands; the sun behind him may be partly obscured by a water-bag on his back [Pl. VII. 3].

URDU.

A gold piece struck in the Urdu, or Royal Camp, sign Aries, date 1036, 22, was published by Mr. H. Nelson Wright in the first Numismatic Supplement to the *Journal of the Asiatic Society of Bengal*, 1904. The coin has been recently presented to the British Museum by Mr. Henry Van den Bergh.

Obv.

شاه
نگیر
اردوی جہا
سکہ
باد روان تا کہ بود
۲۲
و ماہ ۱۰۳۶

Rev.

Within circle of rays fat-tailed Ram sitting to r., looking backward over shoulder.

AV. Wt. 168. S. 75. [Pl. VII. 12.] B.M.

The couplet is:—

Bād rawān tā ki buvaḍ mihr wa māl
Sikka i Urdū i Jahāngir Shāh.

Current be, so long as the sun and moon exist,
The stamp of the Camp of Jahāngir Shāh.

The piece is distinctive in style and fabric. Three other specimens of this very rare and interesting issue are known at Berlin, Vienna, and Christ Church Library, Oxford. On the 1st Farwardīn of year 22 Jahāngir was in camp on the banks of the Chenab en route from Lahore to Kashmir—*N. S.*, xli, p. N. 21—and the coin must have been struck in celebration of the New Year.

AGRA.

My list of 243 gold zodiacal coins of Agra mint includes ninety odd in the National Cabinets of London, Berlin, and Paris. The rest come from the following sources:—

Museums. Glasgow (Hunterian Collection): Edinburgh (Royal Scottish): Oxford (Ashmolean): Cambridge (Fitzwilliam): Christ Church Library, Oxford: Vienna (Kunsthistorisches Museum): Gotha (Herzogliches Münzkabinett): Leningrad (Ermitage): New York (American Numismatic Society): Calcutta (Indian): Lahore (Panjab): Lucknow (Provincial): Srinagar (Kashmere State).

Sale Catalogues. Collection Jhr J. H. F. K. van Swinderen, F. Müller, Amsterdam, 1903: White King Sale Catalogue, Schulman, Amsterdam, 1905: Da Cunha Sale Catalogue.

Private Collections. H. Nelson Wright, Longworth Dames, R. Sutcliffe, and Sir Richard Burn. The first three have been sold recently.

Numerous zodiacal pieces are described by Tychsen, Marsden, and Fraehn, but I believe all these coins are covered here.²⁸ There are odd coins scattered about in other Museums, Sale Catalogues, and Collections, but my list is fully representative.

Complete sets exist at London, Berlin, Paris, Glasgow, Oxford (Christ Church), Vienna, Leningrad, and

²⁸ O. G. Tychsen, *Introductio in Rem Numariam Muhammedanorum*, Rostock, 1794; also *Additamentum*, 1796. W. Marsden, *Numismata Orientalia*, Part II, London, 1825. C. M. Fraehn, *Recensio Numorum Muhammedanorum*, &c., Petropolis, 1828, pp. 448, 449. Also other works by Fraehn.

New York. I believe these sets are genuine with the possible exception of Aquarius. The coins are almost entirely of Agra mint. Aquarius is by far the rarest sign.

The British Museum Cabinet includes a complete set of gold zodiacs, all of Agra mint, bought by Payne Knight in Paris towards the end of the eighteenth century. The rare mints were unrepresented till the recent acquisition of the Urdu piece above mentioned.

The zodiacal coins in the Kaiser Friedrich Museum, Berlin, are very fine; with a few exceptions all came from the Guthrie Collection, purchased by the German Government in 1876. This cabinet excels in pieces from rare mints.

A plate of the twelve signs in gold can be found in P.-F. Bonneville's *Traité des Monnaies d'Or et d'Argent*, &c., Paris, 1806. All are in the Cabinet des Médailles, Bibliothèque Nationale, Paris, and have been described by E. Drouin in the *Revue Numismatique* for 1902, and later by Georges Bataille in *Aréthuse*, 1927; they are of Agra mintage except Aquarius of Ajmer and Sagittarius of Lahore.

All the pieces at Glasgow and Christ Church, Oxford, are of Agra, with an additional Aries of Urdu mint at Oxford. The Glasgow coins are in the Hunterian Collection made by the celebrated surgeon, William Hunter, who died in 1783. The Christ Church pieces were presented by various donors.

The Vienna coins were formerly in the Imperial Cabinet. They are of Agra mint except the unique Aquarius of Fathpur; there is also another Urdu Aries.

The twelve signs in gold are illustrated in a rare

work, *Nummotheca atque Rariora Becceleriana*, by D. R. Capellus, Hamburg, 1684. An edition of 1750 is available at Paris. The Aquarius is again of Ajmer mint, and there is a unique Scorpio struck at Lahore. All are now in the Ermitage Museum, Leningrad. The Scorpio is described by Tychsen in his *Introductio*, and he gives a revised reading of the legend in the *Additamentum*, but this is still far from correct. Capellus calls these pieces the coins bearing the twelve signs of the zodiac struck in her reign of twenty-four hours by Nurmahal, wife of "Gehan Guje", great Mogul, the description being based on Tavernier; a German edition had appeared in 1681. The coins had been brought from India to Hamburg in a box lined with purple silk. Ten, all of one type, were bought by Luder for 1,000 imperial thalers (about £200). Silver zodiacal coins were said to exist, but Capellus never saw one.

The set at New York is that formed by James Gibbs and acquired from him by that great collector Dr. Gerson da Cunha of Bombay. It was sold at the Da Cunha Sale (1889) to Messrs. Spink for £64 and subsequently went to America. The set again appeared in the auction room at New York in 1921, when it came into the possession of Mr. Waldo Newcomer of Baltimore. At the time of my visit to New York in the same year, the set was on view in the Museum of the American Numismatic Society. It has been described and illustrated by Mr. Howland Wood in the *American Journal of Numismatics* for July, 1910. All the pieces are of Agra mint except an abnormal gold Aquarius of Ahmadabad. Four gold zodiacal pieces at the Da Cunha Sale were sold

separately from the set just mentioned. One was the important coin with the Nūr Jahān couplet, of Kashmir mintage, sign Cancer, date 1034, 20, which went to a Mr. Hatfield for £4.

I base my description of the Agra gold issues on the British Museum Catalogue. The couplet has been given above in the extract from Lord Valentia's work.

شاه
اکبر
از جهانگیر شاه
یافت
در آگره روم
A
B زر زبور

The dates are usually in positions A and B. On the early coins the Hijra date is above the regnal year; later they change places.

ARIES. Total 22. All the dates are right.

<i>Number of specimens.</i>	<i>Date.</i>	<i>Type.</i>	<i>Location and remarks.</i> ²⁹
9	1028, 14	B.M. 322	B.M. [Pl. VII. 13.]
1	1029, 15	„	Cat. van Swinderen.
3	$\frac{1030}{16}$	B.M. 323	B.M.
8	$\frac{16}{1030}$	„	—
1	$\frac{18}{1032}$	„	Berlin.

²⁹ See lists above.

TAURUS. Total 35. All dates are correct.

<i>Number of specimens.</i>	<i>Date.</i>	<i>Type.</i>	<i>Location and remarks.</i>
16	1028, 14	B.M. 325	Bull to l. [Pl. VIII. 1.]
2	$\frac{1029}{15}$	B.M. 327	Bull to l. Van Swinderen Cat., and Glasgow.
9	$\frac{1030}{16}$	B.M. 327	Bull to r. [Pl. VIII. 2.]
4	$\frac{16}{1030}$	—	Bull to r. and اکبر شاه
1	$\frac{17}{1031}$	—	Bull to r. B.M.
1	$\frac{18}{1032}$	—	Bull to r. B.M.
2	$\frac{19}{1033}$	—	Bull to l. Berlin and Christ Church.

GEMINI. Total 21. All dates correct except that of Twins with toys type.

1	1028, —	B.M. 330	Leningrad.
9	$\frac{1029}{15}$	„	[Pl. VIII. 3.]
8	$\frac{1030}{16}$	—	—
2	$\frac{16}{1031}$	B.M. 331	Dates wrong. B.M. and Berlin. [Pl. VIII. 4.]
2	$\frac{17}{1031}$	B.M. 332	Berlin and Glasgow.

<i>Number of specimens.</i>	<i>Date.</i>	<i>Type.</i>	<i>Location and remarks.</i>
2	$\frac{18}{1032}$	—	B.M. and van Swinderen Cat.
2	$\frac{19}{1033}$	—	B.M. and Ch. Ch.
CANCER. Total 16. All dates correct.			
3	1028, 14	B.M. 333 a	B.M. and van Swinderen Cat.
6	1029, 15	„	[Pl. VIII. 5.]
2	$\frac{1030}{16}$	—	Glasgow and I.M. Cat.
1	$\frac{16}{1030}$	B.M. 333 c	اكر B.M. Crude. شاء [Pl. IX. 10.]
2	$\frac{17}{1031}$	—	Vienna and I.M. Cat.
2	$\frac{19}{1033}$	—	Paris and Ch. Ch. [Pl. VIII. 6.]

The pieces mentioned at the foot of p. 67, *B. M. Cat.*, may be early imitations.

LEO. Total 14. All dates correct.			
4	1028, 14	B.M. 334	Lion to r. [Pl. VIII. 7.]
5	1029, 15	„	„
2	$\frac{17}{1031}$	B.M. 336	„ [Pl. VIII. 8.]
2	$\frac{17}{1031}$	B.M. 337	Lion to l. B.M. and Glasgow. [Pl. VIII. 9.]
1	$\frac{19}{1033}$	—	Lion to r. A. N. S.

VIRGO. Total 18.

<i>Number of specimens.</i>	<i>Date.</i>	<i>Type.</i>	<i>Location and remarks.</i>
7	1028, 14	B.M. 338	B.M. and van Swinderen Cat. [Pl. VIII. 10.]
1	1029, 15	„	Paris.
1	$\frac{16}{1030}$	B.M. 339	Crouching nude figure; crude. اکبر شاه [Pl. IX. 14.]
1	$\frac{16}{1031}$	B.M. 341	Glasgow. Winged Virgo (manipulated ?). Date wrong. [Pl. VIII. 11.]
1	$\frac{17}{1031}$	„	Vienna.
2	$\frac{19}{1033}$	„	Berlin. B.M. [Pl. VIII. 13.]

I have omitted B.M. 340. The legend of this piece is hopelessly blundered, but the design may have been taken from a genuine coin—[Pl. IX. 12.]

LIBRA. Total 25.

1	$\frac{1028}{14}$	B.M. 342	B.M. See below.
1	$\frac{1029}{15}$	B.M. 343	Berlin.
4	$\frac{1030}{16}$	—	B.M. [Pl. VIII. 12.]
3	$\frac{16}{1031}$	—	Date wrong.

<i>Number of specimens.</i>	<i>Date.</i>	<i>Type.</i>	<i>Location and remarks.</i>
1	$\frac{17}{1031}$	—	Berlin.
10	$\frac{18}{1032}$	—	B.M.
1	$\frac{19}{1033}$	—	B.M.
4	$\frac{19}{1034}$	—	van Swinderen Cat.

Coin B.M. 342 bears the *zīnat zar* Bull couplet, and may not be genuine. In year 19 the Hijra New Year's Day was in the seventh month, so 1033 and 1034 are both correct.

SCORPIO. Total 19.

1	$\frac{1029}{15}$		Tail to r. and sun's rays absent; crude. Glasgow. [Pl. VIII. 15.]
2	$\frac{1028 \text{ sic}}{15}$	—	Tail to r. Date wrong. Da Cunha.
4	1030, 15	B.M. 346	Tail to r. The regnal date of this type is above the word جہانگیر. Date wrong. [Pl. VIII. 14.]
1	$\frac{16}{1030}$	—	Paris. [Pl. VIII. 16]
1	$\frac{16}{1030}$	B.M. 346 a	B.M. [Pl. IX. 13.]
4	$\frac{16}{1031}$	—	Tail to l. B.M. [Pl. IX. 1.]

ZODIACAL COINS OF THE EMPEROR JAHĀNGĪR. 123

<i>Number of specimens.</i>	<i>Date.</i>	<i>Type.</i>	<i>Location and remarks.</i>
1	$\frac{17}{1031}$	—	Gotha.
3	$\frac{17}{1032}$	—	Tail to l. B.M.
2	$\frac{18}{1033}$	—	Tail to r. B.M. and Berlin.

SAGITTARIUS. Total 18. Dates correct.

2	$\frac{1029}{14}$	—	Ch. Ch. and B.M.
2	$\frac{1030}{15}$	—	Vienna and Berlin.
1	1030, 15	—	Glasgow. Regnal date above word جهانگیر.
7	$\frac{16}{1031}$	B.M. 348	B.M. [Pl. IX. 2.]
4	$\frac{17}{1032}$	„	B.M.
1	$\frac{18}{1033}$	„	A. N. S. Very fine.
1	$\frac{29 \text{ sic}}{1034}$	„	Leningrad. Genuine.

CAPRICORNUS. Total 29.

2	1028, 14	B.M. 350	B.M. and H. N. W. Zinat-zarcouplet. Date wrong. [Pl. IX. 3.]
4	$\frac{14}{1029}$	—	[Pl. IX. 4.]

<i>Number of specimens.</i>	<i>Date.</i>	<i>Type.</i>	<i>Location and remarks.</i>
1	1030, 15	B.M. 352	B.M. Same arrangement of dates as B.M. 346(see Scorpio above).
7	$\frac{1031}{16}$	B.M. 353	B.M.
3	$\frac{16}{1031}$	"	
4	$\frac{17}{1032}$	"	B.M. [Pl. IX. 5.]
7	$\frac{18}{1033}$	"	B.M.
1	$\frac{29 \text{ sic}}{1034}$	"	Paris. Quite genuine.

AQUARIUS. Total 5. All dates wrong except that of B.M. 355.

1	$\frac{1029}{15}$	B.M. 356	Paris.
1	$\frac{16}{1030}$	"	Glasgow. [Pl. IX. 6.]
1	$\frac{16}{1031}$	B.M. 355	B.M. [Pl. IX. 11.]
1	$\frac{18}{1032}$	B.M. 356	B.M. [Pl. IX. 7.]
1	$\frac{19}{1033}$	"	Ch. Ch. [Pl. IX. 8.]

Coin B.M. 357 is not genuine—[Pl. IX. 15].

It is difficult to record a definite opinion about Aquarius. I do not think that B.M. 355 is genuine,

and it is the only one of the above coins which has correct dates. There are two gold Aquarius at Berlin, one like B.M. 355 but apparently dated 16, 1030, and the other of type B.M. 356. These pieces do not merit serious discussion because the legends are so crude. As far as style and appearance are concerned, B.M. 356 is authentic. What is to be said of the Aquarius coins of other mints? The Ahmadabad coin is quite abnormal, while the dates of the Ajmer coin at Paris are not correct. This leaves us with the Fathpur piece at Vienna and the Ajmer Aquarius at Leningrad. The silver cast of a Lahore Aquarius at Oxford may have been taken from a genuine coin. I do not know why there was such reluctance to strike coins bearing the sign of the eleventh month. I have not discovered any statement that Aquarius was unlucky.

PISCES. Total 26.

<i>Number of specimens.</i>	<i>Date.</i>	<i>Type.</i>	<i>Location and remarks.</i>
19	$\frac{1028}{13}$	B.M. 358	B.M. [Pl. IX. 9.]
1	$\frac{17}{1031}$	—	B.M. Dates wrong.
2	$\frac{18}{1032}$	—	Paris. Van Swinderen Cat. Dates wrong.
4	$\frac{18}{1033}$	—	B.M.

All the coins of year 13 known to me have a defect at two o'clock of the reverse, so were struck from the same die. Apart from this issue, the Fish is a very rare coin.

I have a fairly long list of Agra rupees of most if not all the signs, except Aquarius; these are well exemplified in the British Museum and at Berlin. The weight is correct, and in my opinion they are genuine original issues. They were struck from gold dies, or from dies closely resembling them. At Berlin and Gotha is a silver rupee, sign Ram, of date 16, 1030. The word سنه, "year", is on the obverse side, and the word اکبر is above شاه.

اکبر
 شاه
 از جهانگیر شاه
 یافت
 در آگره روم سنه ۱۶
 زر زبور ۱۰۳۰

[Pl. X. 1.]

In the British Museum is an Agra half-rupee of sign Leo—[Pl. X. 2]; the date is 1033, 19 and the weight is 75 grains. This piece appears to be genuine, and is unique. I do not know of a genuine half in gold. I illustrate a silver Capricornus at Berlin, dated 14, 1029 [Pl. X. 3].

FATHPUR.

There is a gold Aries of Fathpur mint and a similar piece in silver at Berlin; both came from the Guthrie Collection. They are dated 1028, 14 [Pl. X. 4 and 5]. The gold Aquarius at Vienna is dated 1028; the design is the curious little figure sitting to right on a water-bag and pouring water from a jar down his back [Pl. X. 6]. A fourth piece of Fathpur mint is

the Capricornus silver rupee dated 1028, 14 mentioned by Mr. C. J. Rodgers in *J.A.S.B.*, 1888—see *J.A.S.B.*, 1912, p. 436. The coin was seen by Sir Alexander Cunningham at Lucknow in 1840, but I do not know if it still exists. Each of the above four coins is a single specimen. The couplet is:—

Ba Fathpūr firozanda gusht sikka i zar
Zi nūr i nām i Jahāngīr Shāh i Shāh Akbar.

At Fathpur gold coin became shining
 From the light of the name of Jahāngīr Shāh, son
 of Shāh Akbar.

It was precisely in the tenth month (Capricornus) 1028, 13 that Jahāngīr arrived in Fathpur at the end of his long journey from Ahmadabad, and he tarried there the following three months, Aquarius and Pisces, both 1028, 13, and Aries, 1028, 14. Two of these three are represented by the known coins of Fathpur mint, in addition to the preceding one, Capricornus, but the silver Capricornus, if correctly described, is wrongly dated. The Vienna Aquarius appears to me unquestionably genuine.

KASHMIR.

A Cancer mohur of 1034, 20 with the Nūr Jahān couplet was described and figured by J. Gibbs in the *Journal of the Bombay Branch of the Royal Asiatic Society* for 1878 as of Ajmer mint. The correct reading is Kashmir, as already suggested by Mr. Hodivala in *N. S.*, xli (1928), *Num. Chron.*, 1929. The coin was acquired by Dr. da Cunha and sold to a Mr. Hatfield for £4 as stated above. The legend is the normal couplet—*P. M. Cat.*, p. 128—in which Nūr Jahān is called بادشاه بیگم, “first lady in the land”.

The only other known zodiacal issue of Kashmir mint is the silver Gemini dated R. Y. 15—*Indian Museum Catalogue*, iii, 1908, p. 81. Another specimen is *White King Sale Catalogue*, Amsterdam, 1905, Part III, No. 3691, and a third belongs to the Pandit Ratan Narain Collection now in the Museum of the American Numismatic Society, New York. All three specimens are unfortunately too poor to reproduce. The couplet is that of coin *P. M. Cat.*, No. 920, with Kashmir instead of Ajmer.

LAHORE.

I agree with that great scholar and numismatist Édouard Drouin that the Sagittarius mohur of Nūr Jahān is one of the gems of the French National Collection—*Revue Numismatique*, 1902, p. 273. J. Gibbs could not have written about it as he did if he had seen the original—*N. S.*, xli, p. N. 13. The date is 1035, 20 and the legend is the normal Nūr Jahān couplet as on the Kashmir mohur already described [Pl. X. 10]. The only other specimen known to me is that in the van Swinderen Catalogue, Pl. V.

It gave me great pleasure to find a similar gold piece in the Royal Scottish Museum, Edinburgh. The mint and legend are the same, but the date is 1036, 21, and the sign is Pisces. This is also a single specimen [Pl. X. 11].

An outstanding specimen in the Guthrie Collection at Berlin is the silver Capricornus dated 1036, 21, bearing the following couplet:—

Ba hukm i Shāh Jahāngīr sikka i Lahor
Zi nām i Nūr Jahān bādshāh shud pur nūr.

By order of Shāh Jahāngīr the coin of Lahore
 Through the name of the empress Nūr Jahān
 became full of light.

This Nūr Jahān couplet is found on no other issue. Nūr Jahān is no longer the *bādshāh begam*; she has become the *bādshāh* without any qualification.

I illustrate a second and much finer specimen of this most interesting coin; it was acquired by Mr. C. J. Brown some years ago, and is now in the Patna Museum [Pl. X. 9].



Obv.

Within triple circle on
flowered field

Rev.

Within triple circle Virgo
as on Pl. VIII. 11.

غاز
جہانگیر بادشاہ
۱۰۳۲
ضرب
لاہور ۱۷

AV. Bergsøe Collection.

This is piece No. 598 of *Sale Catalogue*, First Part, of the Collection made by Prof. Vilhelm Bergsøe at Copenhagen, and sold by J. Schulman, Amsterdam, in April, 1903. On inquiry from Amsterdam I was informed that the coin went to Russia, but Monsieur Vasmer tells me that it is not in the Ermitage Museum. The coin is a unique gold zodiacal piece of Lahore mint, sign Virgo, date 1032, 17; the legend is that of the Ajmer Aquarius. There are two things against it,

the crudeness of the reverse design and the wrong date; the sixth month of year 17 belongs to 1031, not 1032. On the other hand, the legend in my opinion is impeccable.

At Berlin, also at Gotha, there is a gold Sagittarius of Lahore mint, dated 1036, 21, which bears the couplet used on the ordinary currency of Lahore mint from the eleventh year to the end of the reign—*P. M. Cat.*, pp. 127, 163-5. The design exactly resembles that of the Nūr Jahān Sagittarius at Paris. This coin is a splendid piece, much superior to the Agra issues [Pl. X. 8].

There is a unique gold Scorpio in the Ermitage Museum, Leningrad, tail to left, dated 1032, 17. It bears the same dates and couplet as the newly published mohur belonging to Mr. H. Nelson Wright—*Num. Chron.*, 1930, p. 205. This extraordinary piece was figured by Capellus as long ago as 1684 [Pl. X. 7].

There are old casts of zodiacal coins at the various museums which are interesting because they may have been taken from original genuine coins. I have plaster reproductions of some of these. Items (3), (4), (6), and (7), discussed by Mr. Hodivala in Article 292, *N. S.*, xlii, are casts, not actual coins. I illustrate a curious silver imitation in the Ashmolean Museum, Oxford. It may be the cast of a genuine zodiacal mohur of Lahore mint with the Nūr Jahān couplet, date 1035, 20. The design is new; it is the figure of a woman holding some object under each arm. I gladly accept Mr. Hodivala's emendation that these are jars from which water is pouring, and the figure is probably Aquarius—*N. C.*, 1929, p. 308 [Pl. X. 12].

R. B. WHITEHEAD.

MISCELLANEA.

NOTES ON SOME RARE OR UNPUBLISHED SEVENTEENTH-CENTURY TOKENS.

RECENTLY I have examined with some care a small collection of tradesmen's tokens of the seventeenth century which I have gathered during the past fifteen years, and which includes forty or more specimens collected by my friend the late David Proskey of Paterson, New Jersey. While most of the tokens are of commoner varieties, several seem to be of special interest because of rarity or some other reason, and it seems that a record of them may be fittingly made in *Numismatic Chronicle*. I have arranged the seven tokens (since presented to the British Museum) that deserve comment after the plan of Williamson's edition of Boyne's work; the Roman numerals are my own, the Arabic numerals are the usual references to Boyne.

I. DERBYSHIRE; Derby.

Obv. TOVCH · NOT · MI[NE · ANOIN]TED —
WILL/IAME/NEWC/OME (4 lines).

Rev. DOE · [MY · PROPHET]S · NOE · HARME —
HIS ·/HALFE/PENY (3 lines).

This differs considerably from the other tokens of Newcome noticed by Boyne, although the same religious formulas are used by him. The token was published by me in the *Numismatist* several years ago, but is, I think, otherwise unknown.

II. GLOUCESTERSHIRE; Cirencester.

Obv. William/Con[. . .]/of Cirens/ter (4 lines in script).

Rev. His/Halfe/Penny/1669 (4 lines, the three former in script).

This octagonal halfpenny is like Boyne's no. 49, except that *both* sides have the inscriptions in script.

III. LONDON ; Cock Lane (?).

Obv. GEORGE · THAPE · AT · Y^E. — Portcullis.

Rev. [...]COCK · LANE · — G.S.T.

It is unfortunate that this farthing token is in rather poor condition ; the inscription on the obverse is quite plain, and is a name not noted by Boyne. Although the C of Cock Lane is blurred, that seems to be the only lane mentioned in his index that ends in the letters "ock" (?); Boyne describes an inn-sign of the Green Lattice in Cock Lane, but I believe the type is a portcullis on the obverse, that on the reverse is exceedingly badly worn, indeed the token is so unevenly worn, it may have been weakly struck. The date probably was originally present but is now quite illegible.

IV. SUSSEX ; East Grinstead. Boyne, 87.

Boyne publishes this as issued by Richard Page and Henry Seastid. My specimen makes it almost certain that the name of the second issuer was LEASTED. The penultimate letter is clearly E.

V. WILTSHIRE ; Sarum.

Obv. [E.D.M] IN · [SAR]VIM · — A skull.

Rev. [IF · THOU · BEL]EIVEST · — A heart.

This farthing token is like Boyne's no. 202, but is struck in pewter. The letters on the obverse which I have bracketed can be made out with some difficulty when one knows what to expect, but can hardly be said to be legible. Great care should be taken not to destroy such pewter and lead tokens, which the literary references show to have been fairly common, as they are of rare occurrence in modern collections.

VI. YORKSHIRE ; York.

Obv. Charles/Farnehill/[of] Yorke/his $\frac{1}{2}$ (4 lines in script).

Rev. A hand holding a cup, emerging from a large sleeve ; below, the date, 1669.

This token is like Boyne's no. 396, but that shows on the obverse a pipe and roll of tobacco of which there is

no trace on the present specimen which is fairly well preserved, especially on the obverse.

VII. UNCERTAIN; Boyne, no. 36 (?).

Obv. *WILLIAM · HALL · — An orb enclosed in an ornamental border shaped like an elaborate heraldic shield, not an octagon, as Boyne's description of no. 36 demands, although the design is made by a double line.

Rev. *PAINES · BRINGS · GAINES — Negro's head to right.

THOMAS OLLIVE MABBOTT.

Hunter College
of the City of New York.

AN ANGLO-SAXON FIND,
temp. EDWARD THE ELDER—ÆTHELSTAN.

On 16 May 1929 and 13 November 1930, there were sold at Messrs. Glendining's rooms, the following coins :

	Anglo-Saxon coins.
St. Edmund penny	1
Archbishop Plegmund (890-914)	25
Alfred (871-900/1)	18
Edward the Elder (900/1-924/5)	436
Æthelstan (924/5-940), including three coins wrongly attributed in the catalogue to Edward, nos. 52 b, 70 (Biorhtwald) and 102 (Wulf- heard)	35
	Total 515

There were also four silver ingots and six continental coins belonging to the same hoard. The similar condition of the coins, the narrow limit of date within which they were all struck, and the preponderance of pennies of Edward the Elder, prove conclusively, I think, that the coins must

have constituted a hoard, or part of a hoard, deposited presumably very shortly after the year 940.

A marked feature of the Anglo-Saxon coinage from the reign of Alfred to that of Edmund is the very high weight which the penny attains. I have therefore thought it desirable to put on record the weight-frequencies of the coins in the find, which I was enabled to obtain by the courtesy of Mr. Samuel Spink. In the following table clipped and broken coins are omitted:

	below 21.9 grs.	21- 21.9	22- 22.9	23- 23.9	24- 24.9	25- 25.9	26 grs. and over	Total
St. Edmund	1	—	—	—	—	—	—	1
Plegmund	—	—	3	5	9	5	3	25
Alfred	—	1	1	4	11	1	—	18
Edward (portrait) .	9	2	3	12	19	6	2	53
Edward (other rare types)	—	—	1	2	7	2	—	12
Edward (ordinary type)	16	11	22	60	154	80	12	355
Aethelstan (portrait)	—	—	—	1	1	—	—	2
Aethelstan (without portrait)	10	—	4	4	14	1	—	33
	86	14	34	88	215	95	17	499

The penny of St. Edmund weighs 20.1 grs. The heaviest coin of Plegmund (1929, lot 4) weighs 27.4 grs.; it is from the same dies as the coin in lot 5 of the same sale, which weighs 23.2 and was struck earlier than the heavy coin. Both the other Plegmund coins exceeding 26 grs. weigh 26.1 grs. (1930, lots 2 and 12). Edward the Elder has two portrait coins above 26 grs., lots 49 (26.1) and 54 (26.6) in the 1930 sale; his portrait coins under 21 grs. are in the 1929 sale, lots 15 (20.7), 17 (20.7), 30 (19.0), 33 (20.1), and in the 1930 sale, lots 23 (19.5), 26 (20.0), 44 (18.3), 45 (20.8), 52 (14.8). Edward's "other rare types" are: 1929, lots 40 (22.3), 41 (24.8), 42 (24.6), 43 (23.8), 44 (24.3), 45 (24.0), 46 (25.0), 47 (24.6); 1930, lots 56 (23.8), 57 (24.6), 58 (25.2), 59 (24.2), 60 (fragmentary).

Of the ordinary type of Edward the Elder the heaviest coin, Torhtelm in 1930, lot 101, weighs 28.1; the other heavy coins are: 1929, lots 61 (one of Beahstan, 26.1), 72 (one of Cunulf, 26.0), 95 (Rihhard, 26.4), 1930, lots 63 (Aeðelwine, 26.2), 74 (second of Beornulf, 27.3), 82 (Cunulf,

27.0), 84 (one of Deorwald, 26.1), 86 (Eadmund, 26.3), 87 (Ellaf, 26.2), 95 (Otith, 26.2), 98 (one of Raegenulf, 26.2). Of the 16 coins weighing less than 21 grs., 8 weigh 20 grs. and over, 3 weigh 19 and over, 3 weigh 18 and over, the Londbriht (or Condbriht?) coin in lot 90 of 1929 weighs 17.8 grs., and the Wulfstan coin in lot 103 of 1929 weighs 16.7 grs.

The above table suggests a standard weight as high as 26 grs. during the reign of Edward the Elder; it seems likely that the weight of the penny was increased during his reign, and this may account for the two coins of Plegmund struck from the same dies weighing 23.2 and 27.4 grs. Perhaps intercourse with France, increased by the Viking settlements, raised the weight of the English pennies to that of the French deniers; pennies exceeding 25 grs. are still found, but less commonly in the reigns of Aethelstan and Edmund.

G. C. B.

TREASURE-TROVE.

THE negotiations between the Treasury and the British Museum, which have been in progress for some years, have now been brought to a conclusion. After the right of the Crown to Treasure-Trove has been established, the administration will lie in the hands of the British Museum. The finder will receive in one form or another the full market-value of his find. The widest publicity is desired by the authorities for the Circular of which we print a copy below:—

Objects of *gold or silver* which have been *hidden* in the soil or in buildings, and of which the original owner *cannot be traced*, are Treasure-Trove, and by law the property of the Crown.¹ If, however, the finder of such objects reports the find promptly, and it is decided that it is Treasure-Trove and therefore the property of the Crown, he will receive its *full market-value* if it is retained for the Crown or a museum. If it is not retained, he will receive back the

¹ Unless (as in some rare cases) the "franchise of Treasure-Trove" has been expressly granted to a subject, in so far as finds in the particular locality are concerned.

objects themselves, with full liberty to do what he likes with them ; or, if he wishes it, the British Museum will sell them for him at the best price obtainable. The only way in which a finder can comply with the law and also obtain these advantages is by reporting the find promptly to the proper authority.

The proper authority is the Coroner for the District in which the find is made, for he is the authority who inquires "of treasure that is found" and "who were the finders". (Coroners Act, 1887, section 36.)

Any one, therefore, who finds such objects should report the find to the Coroner, either direct, or through the local police, or by writing to the Director, British Museum, London, W.C. 1, who will communicate with the Coroner.

Coins and other ancient objects of copper, bronze, or any metal other than gold or silver are *not* Treasure-Trove and finds need not be reported to Coroners. But the British Museum is glad to hear of such finds and, if finds are reported to the Director will, in suitable cases, arrange for purchase or sale.

Any further information may be obtained by applying to the Director, British Museum, London, W.C. 1.

VIII.

THE FIRST FORTH BRIDGE, A.D. 209.

IN the great French collection at the Bibliothèque Nationale there is a unique specimen of a second brass coin of Caracalla, to which, so far as I know, no special attention has ever been directed among numismatists on this side of the Channel, but which seems to me to be a piece of supreme historical interest. Indeed, with the single exception of the gold medallion of Constantius Chlorus from the Beaurains Find, it seems to me the most important of the whole series of Roman coins relating to Britain. This neglect is, I think, mainly due to the fact that its inscription is wrongly read in Cohen's *Monnaies de l'Empire Romain*, where it is given a date which takes it out of the period when Severus and his two sons were in Britain, and sets it five years earlier, in the middle period between the Parthian and the British Wars of Severus. The simple mistake made by Cohen was that of misreading a V, for an X, and so making this interesting coin a product of the seventh and not of the twelfth year of Caracalla's enjoyment of tribunician power. A coin of his seventh year (A.D. 204) could not possibly have any reference to Caracalla's British campaigns (A.D. 208-10). But a coin of his twelfth year, recording a military exploit, must obviously show such an allusion, since the young emperor, his father, and his brother Geta were all on this side of the Straits of Dover in A.D. 209.

The letter X on the coin is rather weakly struck, as a glance at the illustration will show; its lower end is

blurred. But that it is really a coin of the twelfth and not the seventh tribunician year of Caracalla is demonstrated by the character of the portrait on the obverse. In A.D. 204 he was only a young lad of sixteen, and all the undoubted money of that year shows him with a boyish—little more than a childish—face. But five years later his portrait had become that of an adolescent, such as we see in the illustration of this coin. It could not belong to the year when he was only sixteen, but must be placed at that when he attained the age of 21. Indeed some coins of the year 211 begin to show him with traces of an incipient beard—which is well developed on pieces of A.D. 212. Even therefore if there were no tribunicial date on this dupondius, we should be obliged to place it much later than the seventh year of Caracalla. The VII therefore in Cohen's reading of the inscription, as Mr. Mattingly pointed out to me, cannot possibly stand.

The piece may be described as follows :

Obv. ANTONINVS PIVS AVG laureated bust of the young emperor to the right, the shoulders draped.

Rev. PONTIF TR POT XII COS III, in the exergue TRAIECTVS a bridge of trestles supported on three galleys, which rest on clearly indicated waves of the sea. The bridge is furnished with presumably wooden approaches at each end, reaching down to the bank. Crossing the bridge appear in succession (1) a pair of emperors walking side by side, of whom one appears to hold a baton ; (2) four standard-bearers, carrying not legionary eagles but cohort-standards of the usual form ; (3) marching soldiers, including apparently one horseman ; (4) ascending the right-hand incline leading up to the bridge is one more soldier. Fig. 1.

There is no S.C. in the field, and the style of the coin is so good that Cohen puts in his text a query as

to whether the coin ought not to be considered a small medallion. Unfortunately our unique specimen is not in the sharpest state of preservation, though every detail can be made out quite clearly. We could have wished that it had been a sesterce, not a dupondius, in order to get more detail.



FIG. 1.



FIG. 2.

There is only one similar picture of an imperial army passing across a great bridge in the whole Roman series, so far as I am aware. This is to be found on a 1st brass and an aureus of Marcus Aurelius, which are identical in type. This picture [see fig. 2] belongs to the year A.D. 172, as its dating shows, and represents the passage of the Danube by Aurelius and his army. Those no doubt were the prototypes of the piece which we are now considering, and would have been familiar to the mint-master at Rome forty years after. The details of this coin of 172 and our coin of 209 are, however, decidedly varied: the emperor is followed by two standard-bearers only, a horseman, and some foot-soldiers. Also the exergue shows the very common-place **VIRTVS AVG**, and not the interesting **TRAIECTVS** of the dupondius of Caracalla. Moreover,

the inscription round the edge of the reverse is only **IMP VI COS III**, instead of the much longer legend on our present coin. I need hardly mention other coins which bear a much remoter likeness to this piece—such as the sesterce of Trajan with the Danube bridge, but no army—and Hadrian's coin with **DISCIPLINA**, which gives the emperor marching at the head of his troops, but no bridge.

Now having established the fact that our coin belongs to the year 209, the second of the sojourn of Severus and Caracalla in Britain, and being certain that the incident portrayed must have some reference to their doings in this island, it remains to be established what the event, the **TRAIECTVS**, can have been. We have two emperors, not three, crossing a great bridge of boats, and this is natural, because Geta, the old emperor's second son, though he accompanied his father, did not go to the front, but was left in charge of the undisturbed parts of the British province. But why this bridge, and why is the construction and passage of it considered so notable that it required permanent commemoration on the imperial coinage?

The explanation comes, I think, in a passage of Herodian (iii. 47), to whom (along with Dio Cassius) we owe the very disappointing narrative that can be framed of Severus' campaigns in Caledonia. He tells us that the Emperor had, as one of his main difficulties in dealing with the barbarians, the fact that they had to be attacked across broad tidal swamps and estuaries, where they knew the fords and passages at low tide, and among morasses, and would cross them even when the water was above their waists, being hampered by

no armour and practically no clothes, while the Roman soldier would get stopped in pursuit, and very likely drowned, if he pushed on too hastily. Accordingly the emperor caused an unusual amount of labour to be spent on building causeways and bridges, over which he ultimately advanced with success, and pushed far on into Caledonia. Dio Cassius is less explicit, but does allude in a general way to the toil of bridge-building, which was one of the many things which wore out the army of Severus.

The coin with which we are dealing evidently represents a large and important piece of bridge-building, of a structure over which emperors and army could defile with dignity. That it is over deep water is shown by the fact that the bridgeway is laid over large ships—like the structure which Xerxes in earlier days threw across the Hellespont. It is not a mere trestle bridge, built on beams sunk in the bottom of a river-bed, such as would suffice for the passage of any moderate watercourse. Ships were required to make the bridge-building possible—that only three are shown is, no doubt, due to the exigencies of space on the field of the coin—there may have been many scores required unless the vessels were of very large dimensions.

The problem therefore emerges as to where we can find a water-way broad enough to demand a very large boat-bridge for its passage. The Tyne or Tweed would not require any structure large enough to require a feat of engineering thought worthy to be granted honourable commemoration on the Roman coinage. And the Tyne was, before Severus commenced his Caledonian campaign, safely covered by the Northumbrian Wall, which Severus must have

made firm before he started on his offensive campaign against the Caledonians. While as to the Tweed, it was never crossed in its lower and broader course by Roman lines of invasion, which always lay far inland by High Rochester and Newstead, and so by "Dere Street" to the Firth of Forth. There is hardly any trace of Roman activity along the Berwick line of coast.

We might conceivably have thought of the tidal flats of the Solway, over which medieval raiders and modern smugglers are said to have found perilous routes of escape in times of danger. But we need not look on the west side of the island for Severus' feat of bridge-building, for three reasons. The first is that there was a good old Roman road turning the head of the Solway estuary, reaching as far as Birrens ("Blatobulgium") in Dumfriesshire, so that to build a long boat-bridge lower down would be unnecessary. The second is that a bridge across the immensely broad Solway sands, which are exposed for miles at low water, would have been useless, since they run quite dry at low tide, with only a few deep channels, through which river-water escapes to the sea in the midst of the breadth of the flats which are exposed. But the third and most conclusive is that, as Sir George Macdonald has demonstrated, all our traces of Severus, from coin-finds and fortifications, are to be discovered on the east and not on the west coast. Obviously the easy line of advance would have run along the old route from Corbridge via High Rochester, Chew Green, and Newstead, up to the Firth of Forth, where clear indications show that Severus' base camps for the invasion of Caledonia lay about Cramond, a few miles

west of Edinburgh. A good old road existed, and would only need repairing—there must have been plenty of people about Severus who remembered the old occupation of the Lowlands, which had lasted down to the time of Commodus, and had only ceased soon after A.D. 180. That was only 30 years back in A.D. 210.

But granting that Severus must have pushed up the old high road to the Firth of Forth, and that he there met his fleet—there can be no doubt that he would have used the *Classis Britannica*—and full-size ships are shown on our coin—and that he had established himself at Cramond as his base of operations, we at once find ourselves in the neighbourhood of the largest stretch of broad tidal flats that can be found anywhere in this part of Northern Britain, except in the Solway, which we have ruled out of the question. I allude of course to the still-visible expanse of muddy waterways and bogs along the lower course of the Forth, from Stirling down to Alloa and still farther south. You find them indicated on the map by the extraordinary set of loops made by the Forth between Stirling and Alloa. As far as the latter place the estuary of the Forth is accessible to small sea-going ships, but above Alloa it ceases to be a well-marked single estuary, and divides into shallow channels, separated by “inches”, mainly islands rising out of an expanse of mud to-day, but probably hardly visible in A.D. 210, when no draining had taken place, and there must have been much more mud and bog, and much less land above high-water level than there is to-day. I take it that Alloa must have been the highest point to which Severus could have brought up his fleet.

The coin shows us that the emperor built somewhere

a very large boat-bridge, over which he and his son Caracalla conducted their army for the invasion of Fife and the region to its west between Forth and Tay, and with the ultimate intention of overrunning all independent Britain as far as its northernmost cape—which the Romans fondly imagined that they had reached when they got to Kinnaird Head in Aberdeenshire. For after that point the coast begun to trend west instead of keeping on north, and it was vainly supposed that the Moray Firth was the Pentland Firth, if we interpret our informants aright.

The question arises at once why Severus should have built a boat-bridge at all, and not have used for his route to the north the line which had been employed by Agricola in A.D. 80, and Lollius Urbicus in 140. For from the middle of the abandoned and ruined Antonine Wall between Forth and Clyde there is still visible a well-marked Roman road crossing the Forth at or very near Stirling. There we have solid rock on each side of the river, which is quite narrow, and only required a normal wooden bridge of moderate dimensions, over which communication was no doubt made with the forts beyond the Forth, at Strageath, Gask, Ardoch, Inchtuthill, &c., which Agricola and Lollius had built in Strathallan and Strathearn and which (as excavation shows) had been held for two separate periods by the Romans, during their two occupations of the Scottish Lowlands. At first sight it looks as if the obvious route for Severus to employ in A.D. 210 would have been this already existing (though no doubt dilapidated) road, which may be seen quite clearly even to-day where it crosses the battlefield of Bannockburn.

The answer to this query must, I think, be as follows—using Herodian's narrative as our basis of explanation. The army, when it had established its main base camp at Cramond, and had no doubt also occupied some of the ruined forts on the Antonine Wall from Abercorn westward, was being worried by the raids across inaccessible marshes of which Herodian speaks, i.e. by the Caledonians crossing the boggy, muddy flats between Stirling and Alloa, so as to cut into the Roman cantonment area. And if Severus had resolved to advance by the old road, via Bannockburn and Stirling, he would have left these tiresome points of attack between him and his fleet and base at Cramond, since he had gone so very far inland.

But it was very necessary for him to keep in close touch with his fleet, on which he must have relied to a great extent for the provisioning of his army. For evidently he cannot have expected to maintain his troops by local raiding on the resources of Caledonia—which, for an army of 80,000 men or so, would have been negligible. But the fleet, obviously, could not have got up the Forth as far as Stirling, as there is no good water-way among the channels and mudbanks of the estuary after the site of the modern Alloa, where the course of the river is lost between half-submerged islands. Clearly then it would be advisable to keep touch with the fleet-bases by making a permanent passage over the Forth estuary at the highest point which vessels could reach. So that, when the army should have moved on into Fife, it would be drawing stores directly from its rear, and not by the circuitous track, first from the naval base to Stirling and then

from Stirling inland to the particular point at which the objective was proceeding.

The bridge would have to be thence over the estuary at the point highest up stream where ships could float, unless the very highest locality should turn out to be very difficult to reach from the shore, owing to mud and moss. For though a causeway reaching to the end of the boat-bridge could be built across slime and slush, yet the shorter the causeway the easier it would be to build.

There would seem to be only two possible points for the engineers of Severus to choose for the situation of the bridge. Both offer on one side the advantage of good hard ground, reaching fairly close to the water's edge, and separated from high-water mark only by a narrow strip of tidal mud. Unfortunately each has hard ground on one side of the passage only, and not on the other. The first is the southern spot, where the hill and village of Airth, on the south or Stirlingshire side of the Forth, rises to a considerable height, facing the modern village of Kincardine on the other bank. The passage there is about half a mile broad—the landing place on the Clackmannanshire side is on low ground, probably fringed with tidal mud in A.D. 210. And there is no solid earth where the landing party might have chanced to cross at this point. But the most important argument, I think, that tells against the idea of a passage made from in or about Airth is that the Firth, or rather the estuary at the head of the Firth, is more than treble as broad here as at the upper alternative—well over half a mile indeed.

The second and, to my idea, the more likely place to place a bridge of boats is opposite the modern town

of Alloa, on the Clackmannanshire side of the Forth. Here the ground on to which a landing would be made rises steeply from the water, showing a long well-marked ridge of boulder-clay, with coal-measures cropping up through it at several points. It would be an ideal place for a bridgehead fortress. The weak point, however, is that on the Stirlingshire side, from which the Roman engineer would have to make his start, there is an expanse of tidal mud broader than that to be found opposite Airth. But as the river itself is only a third as broad, say 300 yards, the number of ships required for the bridge would be much smaller. It would be necessary to build out from the Stirlingshire side a much longer causeway of access to the southern end of the actual bridge, than would have been required opposite Airth.

But I conclude that this "navvies' work" would be well compensated by the facts that the actual water-breadth to be crossed would be so much less, and that the landing-spot on the other side would be on hard ground, and not on tidal mud, as on the southern alternative crossing point.

It would be quite possible for the army to cross by fording or small bridges at Stirling, to move along the high ground on the north bank, and so to reach Alloa, covering the building of the bridge by establishing its main force, or a large detachment, on the ridge where the town now stands. The engineer and the navy could then get to work, and establish the great bridge, over which for the rest of the campaign the main communication of the Romans would lie. The line of supply so established would be infinitely preferable to that by the long road through Stirling.

With the bridge-head at Alloa as base, there are good ways of exit eastward for the conquest of Fife, up the valley of the Devon, to the region of Dollar and Kinross, where the modern high-road and railway run, and where no doubt there were already Pictish tracks, through what must have been one of the most eligible districts of the tribal lands of the Meatae—the southernmost of the two Caledonian confederacies. Probably the emperor would take in hand the subjection of the lands between Forth and Tay before making any endeavour to penetrate directly north into the Tay valley and the region about Perth. But possibly while one part of the army might be subduing Fife, another might be turning the line of the Ochil Hills on the west, or crossing there by high paths: I should imagine that a movement by the gap of Dunblane, where the railway goes to-day, would be the more obvious course. Once across the Ochils, the natural step, no doubt, would be to reoccupy the deserted and ruined forts of Agricola on the south side of the Tay valley, Ardoch, Inchtuthill, and the rest—chosen long ago and good strategical points to hold in the days of the Flavian dynasty.

As we know, Severus did not halt at the Tay, but pressed right up the east coast in his second campaign, as far as Aberdeenshire. But I do not think that we need trouble ourselves to look farther north than the Firth of Forth for the great *TRAIECTVS* over the bridge of boats. It is inconceivable to my mind that Severus could have thrown a first-class naval bridge over the estuary of the Tay, somewhere near Dundee, a prototype of the unlucky Tay Bridge which perished in the Christmas disaster forty years ago. For in this

direction there are a good two miles of water to be crossed, altogether too large a task, and we have none of the tidal swamps which make such a great figure in Herodian, and the only profit of an erection at such a point would be to secure a shorter line of communication to Cramond, the army's ultimate base. But this would be of little use, for, after crossing Fife, there would still be the Firth of Forth to be passed—and a second bridge would be required over this broad water.

Of course it would be quite tempting to think of the engineers of Severus, based at Cramond, conceiving of a bridge of boats at precisely the same point where the modern Forth Bridge stands, between North and South Queensferry—but the width of the Firth, though so much smaller than at any other point till one reaches Alloa going up stream, is 2,765 yards—a mile and two-thirds—only a trifle less than the two-mile length of the modern Tay Bridge, and I think that such a width makes impossible any idea of a bridge of boats, when one considers the size of Roman vessels, and the sway of the tides on such an enormous breadth of water, not to speak of the danger from storms, which are both frequent and severe in the North Sea. If such a feat as the building of a boat-bridge at Queensferry could have been contemplated and carried out, it would indeed have been a *TRAIECTVS* worthy of commemoration in a 1st brass or a medallion, and not merely on a modest dupondius.

It seems hardly possible to doubt that since this coin was struck for Caracalla, there must have been a similar one for his father Severus—as is the case for all the silver and copper *VICTORIAE BRITANNICAE*

series. But if only one specimen of Caracalla's issue survives, there is every reason to understand why the chance of fortune should have obliterated his father's corresponding coinage altogether.

CHARLES OMAN.

IX.

NOTES ON SOME RARE BYZANTINE COINS.

[SEE PLATE XI.]

THE following notes on some rare Byzantine coins in my collection may possibly interest students and collectors of this series:

1. BASILISCUS (476-477).

Semissis.

Obv. DN BASILIS CPSPPAVG Bust of Basiliscus, bearded, to r. wearing diadem with jewel, or aigrette, in front, cuirass and paludamentum.

Rev. VICTORIAAVGG Victory seated to r. inscribing XXX on shield; in field on l. a star; on r. η . In ex. CONOB.

N. Wt. 33 grs. [Pl. XI. 1.]

Although not unknown, this is an extremely rare coin of which there is no specimen in the National Collection. Sabatier describes, but does not illustrate it, and the coin would appear to be known to Tolstoi only from Sabatier's description. According to Sabatier the reverse legend ends in AVGGG, and the inscription on the shield reads XXXX, but my specimen is perfectly distinct and reads AVGG and XXX.

2. JUSTINIAN II (First Reign, 685-695).

Semissis.

Obv. Σ NI Ψ S TINIA η SM η LT Bust of Justinian II, bearded, facing, wearing crown and robe of lozenge pattern, holding cross potent with lower limb

terminating in globule in r. hand, and globe surmounted by patriarchal cross in l. (The word PAX should no doubt appear on the globe, but the coin unfortunately is not well struck up at this point.)

Rev. DN IHS CHS REX TIHM Bust of Christ, facing, with cross behind head: hair arranged in two rows of curls: beard close.

A. Wt. 32.5 grs. [Pl. XI. 2.]

This is possibly the only specimen of a semissis of the third issue of Justinian II which has come down to us. At any rate it does not seem to have been described, and there is no example of it in the British Museum. Tolstoi, it is true, purports to describe a semissis of this third coinage, but an examination of the illustration he gives (Pl. 61, fig. 45) shows at a glance that the coin is a tremissis, for the emperor holds the cross potent, the denominational mark of the tremissis, not the cross potent with the lower limb terminating in a globule, the mark of the semissis. It is curious that Tolstoi should have made this mistake, for, apart from the index mark, the weight which he gives for the coin, namely 1.4 grms. (21.6 grs.), is identical with the weight of the majority of the tremisses which he proceeds to describe, whilst immediately before he has given the weights of two semisses of the first coinage as 2.15 and 2.05 grms. (31.6 and 33.1 grs.).

3. CONSTANTINE V (741-775).

Semissis.

Obv. GNC ON STANTIN . . Bust of Constantine V, bearded, facing, wearing crown, cuirass and paludamentum and holding cross potent with lower limb terminating in globule in r. hand and mappa in l.

Rev. ΓΕ ΟΝΡΑΜΥΛΤ Bust of Leo III, bearded, facing, wearing crown, cuirass and paludamentum, and holding cross potent in r. hand and mappa in l.

N. Wt. 31.5 grs. [Pl. XI. 3.]

This, like the last coin, is apparently unique. It is of special interest for it disposes of a long-standing misconception, and, incidentally, tends to show that the side of the coin on which the memorial bust of Leo III was placed is the reverse, and not the obverse, as it is generally taken to be. It was on the obverse of the coin, as we have just seen in the case of the semisses of Justinian II, that the denominational mark was placed, and it would seem that the memorial portrait was simply substituted for the previous reverse type.

But the chief interest of the present coin lies in the light it throws upon the distinction between the semisses and tremisses struck during the reign of Leo III and those struck during the reign of his successor.

In order to make the matter clear it may be well to bear in mind that there are three distinct types of solidi bearing the effigy of Leo III on one side and that of his son, Constantine V, on the other [see Pl. XI. 4, 5, and 6]. Remembering that it was the rule of the period to represent a son as beardless upon the coinage of his father, irrespective of his age or beard, no difficulty arises in assigning the first two of these solidi to the reign of Leo III and the third to the reign of his son, and, had the above rule been adhered to in distributing the smaller denominations of the gold coinage, the discrimination would have been equally simple. But numismatists found

themselves faced with an entire absence of semisses and tremisses bearing the representation of a bearded Constantine, and they accordingly arrived at the, as it would now appear, erroneous conclusion that in the case of Constantine V a departure from the established custom was made in respect of the fractional denominations of the solidus and that Constantine continued after the death of his father to be represented beardless. Having regard to the fact that Constantine V reigned about ten years before he in turn associated his own son with him, it was felt that some distinction must exist between the coins issued during this period and those issued during the preceding twenty years during which he reigned in association with his father, and it was accordingly laid down that the semisses and tremisses having a large head of Constantine, and being in low relief, were the issue of the first reign as more resembling the earlier coinage of Leo III, while those with the small head and in higher relief were the issue of the reign of Constantine V as more closely approaching the coinage of his period. No one seems to have realized that the smaller bust was in reality a child-bust, and should in consequence precede the larger and older bust; nor does any one seem to have been troubled by the fact that on the solidus of Constantine V the cross on globe is replaced by the cross potent. And yet this should surely have led to the anticipation of a corresponding change on the smaller denominations. But it was the old story of the sheep and the gate, and we find even Mr. Wroth in a note on page 379 of the British Museum Catalogue saying in reference to a semissis of Leo III which he has wrongly assigned to Constantine V, "It

will be noted that Constantine V is here beardless, but this semissis is in higher relief, and has the reverse head smaller than the semisses struck by Leo III in conjunction with Constantine V". Tolstoi rightly gives the semissis in question [Pl. XI. 7] to Leo III, but for some inexplicable reason he assigns the corresponding tremissis to Constantine V. But the ill-founded theory must now be abandoned. A semissis with a bearded Constantine has at length come to light, and it only remains to discover the corresponding tremissis. The absurdity to which the artificial distinction was capable of leading was emphasized in a recent sale catalogue in which the solidus with the child-bust of Constantine V was rightly assigned to the reign of Leo III, but the corresponding semissis to the reign of his successor.

4. MICHAEL I and THEOPHYLACTUS (811-813).

Tremissis.

Obv. ΜΙΧ ΑΗΛΒΑΣΙΛ Bust of Michael I, bearded, facing, wearing crown, mantle and robe and holding cross potent in r. hand and mappa in l.

Rev. ΘΕΟΦΥΛΑΚΤΟΣ ΘΕ Ε Bust of Theophylactus, beardless, facing, wearing crown and dress of lozenge pattern, holding cross and globe in r. hand and cruciform sceptre in l.

Av. Wt. 20.5 grs. [Pl. XI. 8.]

This, like the preceding coin, is unpublished, and apparently unique. Both the semissis and the tremissis of a provincial coinage are known and illustrated in the British Museum Catalogue (Pl. XLVII, figs. 6, 7, and 8), but so far no specimen of the imperial mint of Constantinople, other than this, seems to have come to light.

5. JOHN VII (1399-1402).

Silver.

Obv. ΙΩΑΕΣΠΟ ΟΛΟΓΟΣΗ Bust of John VII, bearded, facing, wearing nimbus, crown and scalloped tippet, and holding cruciform sceptre in l. hand: pellet on l. of head.

Rev. ^A
 Η St. Demetrius on horseback to r. brandishing sword in r. hand.

R. Wt. 60 grs. [Pl. XI. 9.]

Not merely is this coin apparently unique, but it would seem to be the only coin extant which can confidently be assigned to the brief, and obscure, reign of John VII. Under the arrangement come to in 1381, John, the eldest son of Andronicus IV, was to succeed to the throne upon the death of his grandfather, John V, but upon the happening of that event, John found his uncle Manuel II in secure possession, and with no disposition to make way for him. Manuel, however, would seem to have been not unmindful of his nephew's claim, and when he started on his tour of the Western Courts he raised him to the temporary rank of co-emperor and entrusted the control of the Empire to him during his absence. There can be little doubt but that this present coin was struck during this regency, for it finds its counterpart in a silver coin of Manuel II (Sabatier, Pl. LXIII, fig. 13), and in a bronze coin of the same reign in the British Museum (*B.M.C.*, Pl. LXXVII, fig. 4). M. Ratto, from whose collection the coin comes, reads the final letter of the obverse legend as an N. Unfortunately it is not very distinct, but if it is an N, it is that letter reversed.

JOHN I VATATZES OF NICAEA (1222-1255).

Bronze.

6. *Obv.* $\omega (= \text{I}\omega)$ Half-length figure of John I, bearded, facing, holding labarum in r. hand and globes surmounted by patriarchal cross in l.

Rev. Without legend. Cross within crescent-shaped beaded ornament.

Æ. Wt. 65 grs. [Pl. XI. 10.]

This coin, which also comes from the Ratto Collection, is described in the sale catalogue as unpublished. M. Ratto calls the crescent-shaped ornament on the reverse a diadem. It may be such, but I am more inclined to think that it is merely an ornamental device, for we find bands of somewhat similar design as the motive of another coin of John Vatatzes next to be described.

7. *Obv.* $\overline{\text{I}\omega}$ O John I Vatatzes, bearded, standing facing,
 $\Delta \Delta$ with r. hand on sheath and drawn sword
 C in l.

Rev. Without legend. Four beaded and interlaced bands united at the extremities so as to form a cross; between limbs linear curves; the whole within beaded border.

Æ. Wt. 50.5 grs. [Pl. XI. 11.]

There is not a specimen of this coin in the National Collection, but it is referred to in a note on page 219 of the British Museum Catalogue and illustrated by Sabatier (Pl. LXIV, figs. 11 and 12). There was also a specimen in the Ratto sale.

8.

UNCERTAIN.

Bronze.

Obv. Without legend. Emperor seated facing on horseback riding to r. holding sceptre, or mace, in r. hand: behind him letter Ξ ; in front star.

Rev.  (monogram of the Palaeologi reversed) with small interlaced bands in field to l.

Æ. Wt. 16 grs. [Pl. XI. 12.]

Up to the present this coin has defied identification. The obverse at first sight is suggestive of Trebizond, and it was, as a matter of fact, as a coin of Trebizond that the coin was sold to me. But a closer examination disposes of the probability of that mintage. Although a somewhat similar equestrian figure is to be found on some of the coins of Alexius II of Trebizond and his successors, yet the workmanship and art displayed by this coin are neater and less crude than that of the Trebizond mint, while there is nothing on the reverse of the coin to indicate such an origin. It is possible that it may be a Slav imitation of Byzantine coinage, and the reversal of the monogram may perhaps lend some weight to this theory, but it must be remembered that such technical blunders are far from infrequent upon Byzantine coins and do not of necessity indicate barbarian ignorance. Signor Bertelè, to whom I submitted a rubbing of the coin, while not excluding the possibility of it belonging to the reign of Manuel II (1391-1423), was nevertheless more inclined to assign it to the Dynasts of Rhodes, or to one of the contemporary issues of Asia Minor. In favour of the attribution to Rhodes, we may compare the coins

with the Palaeologi monogram given by Schlumberger, *Numismatique de l'Orient Latin*, p. 218 f., Pl. VIII. 31 and IX. 1.

But, whatever the origin of the coin, it possesses features of considerable interest for Byzantine students, for, not merely does it present an equestrian figure reminiscent of Trebizond, but it assembles on the same coin the Palaeologi monogram as we see it on the coinage of the Byzantine Emperor Manuel II and the four interlaced bands of the coinage of John Vatatzes of Nicaea. The presence of this last device makes one wonder whether, after all, these interlaced bands may not have some heraldic significance.

HUGH GOODACRE.

X.

A HOARD OF COINS FROM NINEVEH.

THE coins described in the following list were found by Dr. R. Campbell-Thompson and Mr. R. W. Hutchinson in excavation at Nineveh in the season 1929-30. They came from about six feet down (midway between sections *CD* of Dr. Campbell-Thompson's superficies), above the site of the Palace of Ashurnasirpal, near a series of Parthian buildings to the south-east of the Temple of Nabu.

154 of the coins have passed into the British Museum; 17 to the Birmingham City Art Gallery; 25 to Sir Charles Hyde, by whose generosity the excavations are mainly supported. The 196 remaining have been returned to Bagdad. All weights are given in grains troy, those of coins not actually retained by the British Museum being recorded in *italic* numerals.

SILVER TETRADRACHMS STRUCK AT ANTIOCH ON THE ORONTES in the period 47-20 B.C. with restored types of Philip Philadelphus (see E. T. Newell in *Num. Chron.*, 1919, pp. 69-113).

Obv.—Head of the king diademed to r. Fillet-border.

Rev.—ΒΑΣΙΛΕΩΣ ΦΙΛΙΠΠΟΥ on r., ΕΠΙΦΑΝΟΥΣ ΦΙΛΑΔΕΛΦΟΥ on l. Zeus enthroned to l. holding Nike in r., sceptre in l.; in l. field monogram of Antioch, beneath throne Δ; in exergue, date.

Date

19 (ΘΙ)	224.0, 220.6, and one other	3
20 (Κ)	231.9, 219.5, 21.9, 218.5	4
21 (ΑΚ)	219.5, 216.0	2

22 (BK) 217.3	1
24 (KΔ) 231.2, 213.9, 213.7	3
25 (KE) 216.0, 208.5	2
26 (SK) 223.8, 220.3, 210.6	3
27 (ZK) 217.2, 216.0	2
28 (HK) 220.3, 209.1	2
29 (OK) 218.1, 208.1, and 4 others	6
30 (Λ) 219.5	1
32? (?BA) 217.1	1
Date uncertain or off the flan	91
	121

Weights of those not kept by the British Museum:
 229.0, 226.3, 225.2, 224.7, 224.6, 224.5, 223.6, 222.4 (2),
 222.3, 222.1, 221.7, 220.5, 219.7 (2), 219.5, 219.3, 219.2 (2),
 219.1 (2), 218.9 (2), 218.7, 218.6, 218.5 (2), 218.4 (2), 218.1,
 218.0, 217.9 (3), 217.8 (3), 217.7 (2), 217.6 (2), 217.5, 217.2,
 217.1, 217.0 (2), 216.6 (2), 216.5, 216.4, 216.1, 215.7, 215.6,
 215.5, 215.4, 215.1, 215.0 (4), 214.5, 214.2 (2), 214.1,
 214.0 (2), 213.9, 213.8, 213.2 (2), 213.1 (2), 212.9, 212.8,
 212.7, 212.6, 212.3, 212.1, 212.0, 211.9, 211.6, 211.4, 211.1,
 210.2 (3), 209.9, 208.8, 208.6, 208.2, 207.8, 207.1, 206.8,
 206.0, 205.3.

Condition: without exception, very much worn. The maximum weight is 231.9 grains (15.03 grammes).

Brass coin of Antioch, *rev.* S•C in wreath, Emperor uncertain. (Halved.) $\frac{1}{2}$
 122

Condition: very much worn.

SILVER TETRADRACHMS OF THE ROMAN PROVINCE OF SYRIA.

NERO. Mint of Antioch. Eagle l. on thunderbolt; in front, palm. S/HP (B.M.C. 189.) 216.6 1
 Eagle r. on thunderbolt; in front, palm and pellet. AIP•Θ (B.M.C. 195.) 225.4 1
 As preceding, but BIP•I. (B.M.C. 198.) 222.4 1

GALBA. Mint of Antioch. *Obv.*—Head r.; of the inscription only ΓΑΛΒΑ legible; star in front of neck (same die as Dieudonné, *Rev. Num.*, 1927, Pl. VI. 1). *Rev.*—Eagle l. on thunderbolt; in front, palm-branch. ΕΤΟVC ΝΕΟΥ ΙΕΡΟΥ Α 223-3 1

OTHO. Mint of Antioch. All as B.M.C. 215. 215-8 1

VESPASIAN. Mint of Tyre (?). Eagle on club. Year 1, as B.M.C., *Phoenicia*, p. 298, no. 1. 217-1, 213-7 2
Year 2, as B.M.C., *Phoenicia*, p. 299, nos. 4, 5. 207-5 1

All the above are very much worn, except the last, which is moderately well preserved.

TRAJAN. Mint of Tyre. Head of Melqarth. Tr. P. Cos. V (A.D. 103-11), as B.M.C., *Phoenicia*, p. 300, no. 12. 221-2 1

Tr. P. Cos. V (A.D. 103-11), as B.M.C., *Phoenicia*, p. 300, no. 13. 228-7 1

Tr. P. XIV. Cos. V (A.D. 110), as B.M.C., *Phoenicia*, p. 301, nos. 14 f. 214-7 1

Mint of Tyre (?). Eagle on club. Tr. P. XV. Cos. V (A.D. 111), as B.M.C., *Phoenicia*, p. 302, nos. 22 f. 209-9 1

Tr. P. XVI. Cos. VI (A.D. 112), as B.M.C., *Phoenicia*, p. 302, nos. 24 f. 209-6, 209-3 2

These coins of Trajan are somewhat worn, the last less so than the others.

SEPTIMIUS SEVERUS. Mint of Antioch (A.D. 202-11). Tr. P. Cos. III. Star below eagle. As B.M.C., *Galatia*, &c., p. 193, nos. 347 f. 215-2 1

Tr. P. Cos. III. Similar, but bust undraped. 204-9, 189-0 2

Mint of Antioch (?). Tr. P. Cos. III. Eagle on haunch. As B.M.C., *ibid.*, no. 351, but ΔΗΜΑ ΡΧ•ΕΞ•ΥΠΑ•ΤΟ•Γ 196-8 1

Mint of Tyre (A.D. 202-11). Tr. P. Cos. III. ΑΥΤΚΑΙCΕΠ CΕΟΥΗΡΟCCE Bust r., laureate, wearing paludamentum and cuirass. *Rev.*—ΔΗΜΑΡΧ•ΕΞ•ΥΠΑΤΟCΤΟΓ. Eagle on club; head l., holding wreath; between legs, murex. 230-3 1

- CARACALLA. Mint of Antioch (A.D. 208-12). Star below eagle. Tr. P. Cos. III. Bust laureate, wearing paludamentum. **AVT·KAI·ANTΩ NEINOC·CE·** 215-1, 202-7. 2
- Bust laureate, wearing paludamentum and cuirass. **AVT·KAI·ANTΩNEINOC·CE** 224-8, 221-1 2
- Bust radiate, unclothed; inscription as preceding. 209-4 1
- Mint of Tyre (A.D. 208-12). Bust laureate, unclothed. **AVTKAI ANTΩNEINOCCE** Rev.—**ΔΗΜΑΡΧΕΞ ΥΠΑΤΟC ΤΟΓ** Eagle on club (?), head l., holding wreath; between legs, murex. 183-6 1
- GETA. Mint of Antioch (A.D. 209-12). Star below eagle. Tr. P. Cos. II. Bust r., bearded, laureate, wearing paludamentum. **AVT·KAI·ΓΕΤΑC·CE·** Rev.—**ΔΗΜΑΡΧ·ΕΞ·ΥΠ ΑΤΟC·ΤΟ·Β·** 218-0 1
- Mint of Antioch. Eagle on haunch. As B.M.C., *Galatia*, p. 198, nos. 381 f. (both these show the incorrect pointing **Ε·Ξ·**). 221-0, 216-3 2
- Mint of Tyre (A.D. 209-12). Tr. P. Cos. II. Bust r., bearded, laureate, unclothed. **AVT·KAI·ΓΕΤΑC·CEB** Rev.—Eagle on club, symbol murex, as rev. of B.M.C., *Phoenicia*, p. 305, no. 42. 204-9 1
- All these coins of Septimius Severus and his sons are in mint condition.
- Geta appears to have grown his beard in 208-9 (e. g. the aureus on which he is Cos. II, but still not Augustus, C. 112). These coins, on which he has the *tr. p.*, cannot be before 209.

SILVER DIDRACHMS OF CAESAREA IN CAPPADOCIA.

- TRAJAN. Tr. P., Cos. VI. Rev.—Aquila between two standards. Cp. B.M.C., *Galatia*, p. 57, no. 88. Badly worn. 155-9 1
- Rev.—Six ears of corn. Cp. B.M.C., *ibid.*, no. 85, but bust shows traces of clothing only on l. shoulder. 157-4. Worn 1

Rev.—Shrine of goddess. Cp. B.M.C., *ibid.*,
p. 55, no. 74, but bust as on preceding. 145-0.
Worn 1

PARTHIAN DRACHMS.

- A. Types and inscriptions of drachms attributed to
Goterzes (B.M.C., p. 165, nos. 34 f.; Petrowicz,
Pl. XVII. 16); Volagases I (B.M.C., p. 186,
no. 66, Pl. XXIX. 6). 57-8, 57-8, 54-8, 54-7,
54-8, 53-8, 53-5, 52-1, 51-4, 51-1 (2), 48-4; and
the following not kept by British Museum:
56-7, 56-6, 55-7, 55-4, 55-3, 55-2, 55-0 (2), 54-9 (2),
54-8, 54-7, 54-6, 54-5 (2), 54-4, 54-3 (4), 54-2 (3),
54-0, 53-7, 53-6, 53-4, 53-3 (2), 53-1, 53-0, 52-9,
52-6 (2), 52-5, 52-4, 52-3 (2), 52-2 (3), 51-7 (2),
51-6, 51-1, 51-0 (3), 50-9 (2), 50-8 (2), 50-6 (2),
49-6, 49-3, 47-2, 46-5, 40-7. 71
- B. Attributed to Mithradates IV (B.M.C., p. 217,
nos. 1 ff., Pl. XXXIII. 6 ff., *circa* A.D. 130-47),
or VI (Petrowicz, Pl. XXII. 5, *circa* A.D. 116).
57-2. 1
- C. Volagases III (A.D. 147/8-91), (IV Petrow.).
58-5, 58-4, 56-5, 56-3, 56-1; and the following
not kept by the British Museum: 58-7, 58-2,
57-4, 57-3, 57-2, 56-9, 56-7, 56-6, 55-0, 54-4 15
- D. Volagases V (A.D. 207/8-221/2), (VI Petrow.).
57-1 1
- E. Artabanus V (A.D. 213-27). 57-1, 56-6, 56-1,
55-2. 4

Of group A, most of the specimens are in good or
only slightly worn condition. B is in mint
state. Group C shows little sign of wear. D
has hardly circulated at all, E the same.

ROMAN DENARIIL.

- GALBA. Roma renasc. B.M.C., I, p. 312, no. 25.
48-2 1
- OTHO. Pax orbis terrarum. B.M.C., I, p. 364, no. 4.
51-6 1

VITELLIUS. Pont maxim. B.M.C., I, p. 373, no. 34.	
48-7	1
xv vir sacr fac. B.M.C., I, p. 373, no. 39.	
50-9	1
VESPASIAN. Iudaea. B.M.C., II, p. 6, no. 35. 50-4.	1
Augur tri pot. B.M.C. II, p. 11, no. 64. 50-3	1
Tr p cos v pon max ? B.M.C., II, p. 26,	
no. 138 ? 45-9	1
Pon max tr p cos vi. B.M.C., II, p. 31, no.	
163. 50-5	1
Imp xix. B.M.C., II, p. 39, no. 216. 49-7 .	1
Annona aug. B.M.C., II, p. 51, no. 295. 43-4	1
TITUS. Tr p ix imp xv cos viii p p. (Fulmen on	1
throne.) B.M.C., II, p. 232, no. 51. 54-9 .	1
do. Throne. B.M.C., II, p. 233, no. 60. 50-1	1
do. Wreath on curule chair. B.M.C., II,	
p. 234, no. 70. 49-4	1
do. Tripod, &c. B.M.C., II, p. 236, no. 80.	
50-4	1
do. Column, shield, and laurels. B.M.C.,	
II, p. 245, no. 126. 49-2	1
DOMITIAN. Cos. VI on <i>obv.</i> <i>Rev.</i> —Princeps iuven-	
tutis. B.M.C., II, p. 47, no. 269. 51-2. .	1
TRAJAN. <i>Rev.</i> —Cos v pp s p q r optimo principi.	
(Aequitas.) (C. 85.) 52-1	1
P m tr p cos vi p p s p q r. (Genius.) (C.	
276.) 49-7	1
do. Felicitas. (C. 278.) 51-1	1
S p q r optimo principi. (Felicitas.) (P m tr	
p cos vi p p on <i>obv.</i>). (C. 404.) 49-0	1
HADRIAN. <i>Rev.</i> —cos iii. (Virtus.) (C. 353.) 51-8.	1
Pietas aug. (C. 1038) 49-2	1
Victoria aug. (C. 1454.) 50-6	1
ANTONINUS PIUS. <i>Rev.</i> —cos iiiii. (Fortune.) (P p tr p	
xv on <i>obv.</i>). (C. 267.) 53-0	1
<i>Rev.</i> —cos iiiii. (Abundance.) (P p tr p xv on	
<i>obv.</i>). (C. 288.) 46-9	1
DIVA FAUSTINA I. <i>Rev.</i> —Augusta. (Piety at altar.)	
(C. 124.) 54-0	1
MARCUS AURELIUS CAESAR. <i>Rev.</i> —Tr pot xi cos ii.	
(C. 721.) 51-2, 51-6	2

M. AURELIUS AUGUSTUS. <i>Rev.</i> —Liberal aug v cos iii (tr. p. xxiii on <i>obv.</i>). (C. 412.)	46.4	1
FAUSTINA II. <i>Rev.</i> —Vesta. (C. 286.)	50.5	1
DIVA FAUSTINA II. <i>Rev.</i> —Aeternitas. (C. 6.)	42.5	1
LUCIUS VERUS. <i>Rev.</i> —Tr p v imp ii cos ii. (C. 270.) 51.3		1
COMMODUS. <i>Rev.</i> —P m tr p x imp vii cos iii p p (Jupiter? seated l., holding sceptre and fulmen.) (C. 472 var.)	45.0	1
Nobilit aug p m tr p xii imp viii cos v p p. (C. 385.)	57.6	1
P m tr p xiii imp viii cos v p p (Genius.) (C. 532.)	44.6	1
Iov iuven p m tr p xiii cos v p p. (C. 259.) 34.4		1
P m tr p xvii imp viii cos vii p p (Fides Militum.) (C. 586.)	51.5	1
ALBINUS. <i>Rev.</i> —Miner pacif cos ii.	51.2, 43.8	2

SEPTIMIUS SEVERUS.

A.D. 193.

Viet aug tr p cos. (C. 682.)	39.7	1
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A.D. 194-201.

Fortun reduc. (C. 175, but cos ii.)	52.0	1
Invict [imp tropae]. (C. 234.)	51.0	1

A.D. 195.

Part arab part adiab cos ii p p (imp. v on <i>obv.</i>). (C. 365.)	51.0, 44.4	2
P m tr p iii cos ii p p (imp v on <i>obv.</i>). (C. 390.) 51.2, 50.2, 48.5		3
Tr p iii imp v cos ii (cos ii also on <i>obv.</i>). (C. 660.)	49.0	1
P. m tr p iii cos ii p p (imp vii on <i>obv.</i>). (C. 404.)	62.5, 41.5	2

A.D. 195-6.

Arab adiabenic (imp vii on <i>obv.</i>). (C. 52.) 46.0		1
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A.D. 196.

P m tr p iii cos ii p p (imp viii? on <i>obv.</i>). (C. 419.)	51.1	1
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P m tr p ii[ii co]s ii p p (imp viii on <i>obv.</i>).	
(C. 424.) 58-9	1
P m tr p iiiii cos ii p p (imp viii on <i>obv.</i>).	
(C. 429.) 48-8	1

A.D. 196-7.

Profectio aug (imp. viii on <i>obv.</i>). (C. 578.)	
44-8	1
Vota publica (imp viii on <i>obv.</i>). (C. 777.)	
59-0, 55-5, 47-9, 45-3	4
Providentia aug (imp viii on <i>obv.</i>). (C. 592.)	
49-2	1
Securitas publica (imp viii on <i>obv.</i>). (C. 647.)	
51-0	1
Adventui aug felicissimo (imp viii on <i>obv.</i>).	
(C. 6.) 55-0, 48-8	2
Fortunae reduci (imp viii on <i>obv.</i>). (C. 188.)	
58-8	1

A.D. 197.

L sept sev pert aug imp viii.	
Rev. p m tr p v cos ii p p. (C. 444.) 52-8,	
52-6, 38-8	3
L sept sev pert aug imp viii (or viiii).	
Rev. p m tr p v cos ii p p. (C. 436 or 437.)	
61-7, 54-8	2
L sept sev pert aug imp viiii.	
Rev. libero patri. (C. 304.) 53-8	1
profectio aug. (C. 580.) 50-6	1
L sept sev pert aug imp viiii.	
Rev. p m tr p v cos ii p p. (C. 433.) 51-7	1
do. (C. 442.) 51-5	1

A.D. 197-8.

L sept sev pert aug imp x.	
Rev. vict augg cos ii p p. (C. 694.) 49-2,	
47-6, 40-3	3
Annonae augg (imp x on <i>obv.</i>). (C. 37, but	
augg instead of aug.) See <i>Atti e Mem. dell'</i>	
<i>Instituto</i> , 1925, p. 65. 58-4, 53-0, 51-7	3
Iovi conservatori (imp x on <i>obv.</i>). (C. 236.)	
53-6	1
Marti pacifero (imp x on <i>obv.</i>). (C. 315.)	
49-7	1

Paci aeternae (imp x on <i>obv.</i>). (C. 357.)		
55.5, 46.9		2
Saluti augg (imp x on <i>obv.</i>). (C. 641.)	48.4,	
41.0		2

A.D. 198.

P m tr p vi cos ii p p (imp x? on <i>obv.</i>).		
(C. 449?) 47.5		1

A.D. 198-206 (imp xi).

Aequitati augg. (C. 21.)	47.6	1
Fortunae augg. (C. 195.)	53.1	1

A.D. 201.

Severus pius aug		
Rev. Part max p m tr p viiii. (C. 370.)	48.0	1
Severus aug part max p m tr p viiii.		
Rev. Cos ii p p. (C. 98.)	51.5	1

A.D. 203.

P m tr p xi cos iii p p. (C. 461.)	49.0	1
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A.D. 206.

P m tr p xiiii cos iii p p. (C. 476.)	46.3	1
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A.D. 207.

P m tr p xv cos iii p p. (C. 489.)	56.0	1
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Undated.

Felicitas augg. (C. 135.)	50.8	1
Moneta augg. (C. 343.)	49.5	1

JULIA DOMNA.

Concordia. (C. 21.)	47.6	1
Diana lucifera. (C. 27.)	57.8, 51.4	2
Hilaritas. (C. 72.)	57.2, 48.4	2
do. (C. 79.)	53.8, 49.7	2
Iuno. (C. 82.)	53.9, 45.0, 37.6	3
Pietas augg. (C. 150.)	52.5, 50.6	2
Saeculi felicitas. (C. 174.)	54.2, 51.4	2
Venus felix. (C. 198.)	56.7	1
Vestae sanctae. (C. 246.)	50.0, 41.0	2

CARACALLA CAESAR.

A.D. 196-7.

M aur anton caes pontif.

Rev.—Destinato imperat. (C. 53.) 47.4 . 1

Marti ultori. (C. 154.) 54.4, 46.4,
44.6, 40.0 . 4

Principi iuventutis. (C. 505.) 51.8 . 1

M aur antoninus caes.

Rev.—Securitas perpetua. (C. 562.) 50.7 . 1

Spei perpetuae. (C. 594.) 50.0 . 1

CARACALLA AUGUSTUS.

A.D. 198.

Imp c(ae) m aur ant(on) aug p tr p.

Rev.—Fides publica. (C. 82.) 54.0 . 1

Moneta augg. (C. 168.) 52.7 . 1

A.D. 199.

Imp caes m aur anton aug.

Rev.—Pontifex tr p ii. (C. 406.) 51.5,
48.0, and one broken in half, 32.4 . 3

Antoninus augustus.

Rev.—Pontif tr p ii. (C. 413.) 53.5 . 1

A.D. 201, or later.

Antoninus pius aug.

Rev.—Concordia felix (marriage with Plau-
tilla, 202). (C. 23.) 55.0, 53.5 . 2Rector orbis. (C. 546 var.) *Atti e Mem.*
dell' Istituto, 1925, p. 65. 46.2 . 1

Undated.

Antoninus Augustus.

Rev.—Rector orbis. (C. 542.) 56.8, 54.9,
53.9, 51.1 . 4

Securit orbis. (C. 572.) 56.1 . 1

GETA CAESAR.

A.D. 198-201.

P septimius geta caes.

Rev.—Provid deorum. (C. 170.) 45.8 . 1

P sept geta caes pont.

Rev.—Nobilitas. (C. 90.) 53.2, 47.3 . 2

Vict aetern. (C. 206.) 53.6 . 1

A. D. 203-6.

P septimius geta caes.

Rev.—Pontif cos. (C. 104.) 49·8 . . 1

PLAUTILLA.

A. D. 202-5.

Plautillae augustae.

Rev.—Propago imperi. (C. 21.) 54·5 . 1

Pietas augg. (C. 16.) 51·8 . 1

387

The later coins of Severus and the members of his family are in mint state.

This find ought to throw some light on the attribution of certain denarii to an Eastern origin. On this point, Mr. Mattingly is of opinion that the following varieties, among those described above, were struck at Eastern mints:

SEPTIMIUS SEVERUS.

(?) Fortun reduc. (C. 175 var.)

Invict imp tropae. (C. 234.)

Tr p iii imp v cos ii. (C. 660.)

P m tr p v cos ii p p (imp viii on *obv.*) (C. 444.)Cos ii p p (tr p viii on *obv.*) (C. 98.)

DOMNA.

Concordia. (C. 21.)

CARACALLA.

Moneta augg. (C. 168.)

Securit orbis. (C. 572.)

A larger proportion of Eastern issues might have been expected, if all is right with the attribution.

G. F. HILL.

XI.

THE COINAGE OF THE ELEIANS.

THE detailed investigation of the Eleian coinage made by Mr. C. T. Seltman has brought to light some interesting facts in regard to the use of dies which may help to explain the origin and purposes of this coinage. It is generally accepted that the obverse-dies of Greek coins lasted, on the average, longer than the reverse-dies, presumably on account of the conditions under which they were used: if the reverse-die was hammered down on a flan of metal placed on the obverse-die, it would naturally tend to break sooner than the other die. There is a considerable difference between the statistics as to relative life of dies obtainable from coinages in the East and in the West of the Greek world, which may also be due to differences in mint-practice: in the East, at any rate after the fourth century B.C., the die-positions of the coins suggest that the dies were normally fixed or adjusted, while in the West they seem more commonly to have been loose. At Alexandria, where the adjustment of dies was most rigidly observed, it is probable that the obverse-die was held firmly in an anvil, and the reverse hinged or mechanically guided to it: sets of coins from the same pair of dies show an exactitude in correspondence of position on the two faces which could hardly be obtained except by some such device; and when an obverse occurs with two or

three different reverses, it has precisely the same relative position in regard to each.¹ If the obverse-die was set in an anvil, it would thereby have its life considerably lengthened; and it is not surprising to find that calculation shows that the proportion in the dies of the Alexandrian billon tetradrachms was between eight and nine reverses to one obverse (*Num. Chron.*, 1910, p. 338). As a matter of fact, it is easy to find, in any large group of Alexandrian coins, examples of the coupling of an obverse-die with four or five different reverses, while it is very rare to find a reverse-die used with more than one obverse, and there is no instance recorded of a reverse associated with more than two obverses. In other districts where "fixed" dies were used, such as Asia Minor, a proportion comparable to the Alexandrian can be discovered; for instance, in the series of tetradrachms struck at Smyrna in the second and first centuries B.C., 13 obverse-dies occur with two different reverses, 4 with three, 2 with four, 3 with five, 2 with six, and 1 with twelve: while only 4 reverse-dies are used with two different obverses, and none with more than two. Of course, if a large issue of coins were being made, it would happen from time to time that an obverse-die collapsed while the reverse-die which was in hand was still good, and so could be mated with a fresh obverse: but this was comparatively infrequent.

On the other hand, in the West, where the dies were "loose", the life of the reverses seems to have been much nearer to that of the obverses; and it is

¹ I propose to treat this point at length in the introduction to the Catalogue of Alexandrian Coins in the Ashmolean Museum, which is now in the Press.

understandable that, if no backing was given to the obverse, it would share the strain more equally with its fellow than was the case under Eastern conditions. Recent publications have supplied much information in regard to the coupling of dies in Sicily and South Italy, especially in the fifth century B.C.; and a summary of the figures obtained in certain cases is set out below in tabular form, giving the number of couplings of an obverse or reverse die with more than one mate. The works cited are: (1) E. Boehringer, *Die Münzen von Syrakus*: (2) L. Tudeer, *Die Tetradrachmenprägung von Syrakus*: (3) A. Gallatin, *Syracusan Decadrachms of the Euainetos Type*: (4) W. Schwabacher, *Die Tetradrachmenprägung von Selinunt*: (4) K. Regling, *Terina*: (6) S. P. Noe, *The Coinage of Metapontum*, part ii.²

<i>Syracuse</i> :	2	3	4	5	6	7	8	9
(1) <i>obv. with revv.</i>	63	49	26	11	4	2	4	1
<i>rev. with obv.</i>	114	36	4	1				
(2) <i>obv. with revv.</i>	10	8	5	4	1			1
<i>rev. with obv.</i>	24	5						
(3) <i>obv. with revv.</i>	3	3	5	4	1	1		
<i>rev. with obv.</i>	15	5	1					
<i>Selinus</i> :								
(4) <i>obv. with revv.</i>	6	2	1	2	2			
<i>rev. with obv.</i>	10							

² The coins of the first period in (1) and of Part I of (6) are not included, as the reverse-dies for these were of the nature of a punch, and so had different conditions of stress from the later dies; and in (3) the dies with the chariot are regarded as obverses and those with the head as reverses, which is certainly correct for some of the decadrachms and probable for most.

<i>Terina:</i>	2	3	4	5	6	7	8	9
(5) <i>obv.</i> with <i>revv.</i>	8	6	2	1	2	1		
<i>rev.</i> with <i>obv.</i>	13	1	1					

Metapontum:

(6) <i>obv.</i> with <i>revv.</i>	31	16	4	2		1		
<i>rev.</i> with <i>obv.</i>	17	2						

These figures suggest that at Syracuse the life of an obverse-die in proportion to that of a reverse-die was rather under 3:2, which agrees approximately with Dr. Boehringer's record (p. 73) of 364 obverses and 500 reverses; at Selinus it was over 2:1; at Terina just 2:1; and at Metapontum 7:2. Under these conditions, it is natural that the association of a reverse with more than one obverse should occur much more frequently than in the East; and, if the dies were loose, a shifting of pairs would be much more easily done. It may well have been the case, as suggested by Dr. Boehringer, that the mint-officials, realizing that the obverse-dies lasted longer than the reverse-dies, kept several of the latter on hand and used three or four concurrently.

The lists of Eleian coins given by Mr. Seltman show a use of dies which is not very different from the Syracusan. The table derived from them is as follows:—

	2	3	4	5	6	7	8	9	12
<i>obv.</i> with <i>revv.</i>	27	20	14	11	3	2	2	1	1
<i>rev.</i> with <i>obv.</i>	56	19	3	2					

So far as can be concluded from these figures, it would not appear that the Eleian obverse-dies were shorter lived in comparison with the reverse-dies than was the case in Sicily: the proportion is near the same ratio of 3:2. Similar to Syracusan practice, also, is the not infrequent use of a reverse with more than

two obverses. But an examination in detail of the cases where a reverse-die was coupled with three, four, or five obverses shows a different character, and suggests that the changes in coupling were not always due to the wearing out of the dies, nor to the concurrent employment of several reverses with one obverse. Mr. Seltman has noted this difficulty: for instance, he says, "were it not for the fact that these two dies actually share a reverse-die, one would be tempted to put an interval of several years between them": and again, "owing to classification by obverses, I have been forced to place what is presumably the earliest of these four seated figures last". While at Syracuse the couplings of dies are always of examples contemporary in style and, with only one or two exceptions, of the same group, in Elis one die may be associated with others of different groups and varying styles. That the changes were not necessitated by wear is shown by the fact that, of the two reverse-dies which were associated with five different obverses each, one was used with obverses which were coupled respectively with eight, four, four, three, and two reverses, the other with eight, three, three, two, and one. This suggests very strongly that these combinations were not governed by ordinary technical considerations: and a reason for them may be sought in the economic purposes of the coinage.

The output of the Eleian mint consisted mainly of staters, if the coins that have survived may be taken as a guide: fractional pieces are comparatively rare. On the general principles that can be deduced from the history of Greek coinages, this should mean that the coins were intended chiefly for export:

a currency for use in local trade would naturally include a plentiful supply of small change: and, in fact, the issues of most of the Peloponnesian communities during the period when the Eleian mint was most active consist almost entirely of the lower denominations. In the sixth and fifth centuries B.C. the main sources of staters for Greece proper were the cities which owned or controlled supplies of silver—Aegina, Corinth, and Athens—and marketed their silver in the form of coin, each at its own price, or, in other words, in coins struck on its own standard. Outside producers of silver, such as the Thraceward areas, adjusted their staters somewhat irregularly to one or other of these standards, as commercial convenience required: but these staters were probably sold as bullion. Other Greek cities could use the staters that came to them for purposes of external trade, since they could not increase the value of the coins by re-striking them: for their home markets they could cut up staters and mint the silver in smaller pieces.

But, while the predominance of staters in the Eleian coinage suggests that it was intended for export, there is nothing else in it that resembles the great commercial coinages mentioned. One very marked feature of the latter is the uniformity of the types: when Aegina and Corinth and Athens had secured a foreign market for their silver, they found it desirable, as many other states have done, to adhere closely in their issues to the same designs that were on the coins which first became popular. The types of the Eleian coins, on the contrary, are very varied: the artists employed seem continually to have sought new designs or new modifications of an old design; and there can

hardly be a more striking contrast in conceptive spirit than that between the Eleian series of the fifth and fourth centuries and the sternly conservative Athenian issues of the same period. Again, the staters of the Greek commercial coinages were fairly exact in their weights: this was an obvious advantage for purposes of foreign trade, since, even if a coin was taken as bullion only, it would be more attractive if its metal content could be known without the use of a balance: and here again Athens is pre-eminent, the average variation in weight of Athenian fifth-century staters being well below one per cent. But the weights of the Eleian staters are irregular: the first basis of the coinage would seem to have been more or less worn Aeginetan staters, which were restruck without regard to the amount of metal they had lost: and they would not have won popularity in foreign markets on this account.

The attitude of outside merchants to the Eleian staters is indicated by the frequent occurrence on these staters of small punch-marks, such as are more commonly found in the East than in Greece itself. The earliest instance in which a series of coins is extensively punch-marked is that of the Lydian electrum of the seventh century B.C.: the same treatment was applied at a later date to Persian silver sigloi, probably in the same districts of Western Asia Minor, and then to certain Pamphylian and Cilician pieces; and it was very freely done with the regal issues of the first of the Ptolemies in Egypt, where also Athenian coins had previously been similarly stamped. In all these cases the purpose of the punch-mark was apparently the same: it was not, as a countermark often was,

intended to attribute a new denomination to the coin, but rather to demonetize it and treat it at its bullion value; and the mark endorsed the coin with a fresh guarantee of quality by some person whose local credit was better than that of the original guarantor. Apart from the Eleian coins, the only series from Greece proper which is found punch-marked at all frequently is the Aeginetan: there is no evidence available as to the time when this was done to the staters of Aegina, or as to the districts where the marked coins occur: but it is conceivable that, after the fall of Aegina in the fifth century, the Aeginetan coins which were in circulation might be demonetized. In the case of the Eleian coins, however, it is clear that the marks were often added soon after their issue, as many of the punch-marked specimens are in fresh condition, and there is no reason for regarding them as due to a change in the credit of the Eleian community; and these punch-marked pieces are found not only far afield, but close to the borders of Elis in Arcadia. It would seem that this practice indicates that the Eleian staters were not regarded as a good commercial currency with an established monetary value, but only as bullion to be taken at silver value.

There was indeed no reason why the Eleians should have struck coins for export, so far as ordinary trade considerations were involved. They had no native supplies of silver to put on the market, and they were mainly an agricultural community, who would find it more advantageous as a rule to pay for goods which they imported in their own produce rather than in metal which they had to buy from abroad. It is true that, on the occasion of an Olympic festival, the dis-

trict was crowded with visitors from all parts of Hellas, and for a time became a busy centre of trade: but there would be no need to provide local currency, other than perhaps small change, for these gatherings. The visitors would bring their own money, a good part of which would pass into the treasuries of the Eleians and the temples: what went out again, so far as it represented commercial transactions, would be in the hands of traders and others who had come to Olympia to make a profit at the fair; and these would naturally prefer to take their cash in the form of one of the better-known currencies rather than the Eleian.

The accumulation of coin in Elis during an Olympic festival must have been very considerable: the accounts given of the management of the games do not suggest that the expenses would be very heavy, and there cannot have been the same overhead cost of upkeep as at places like Delphi and Epidaurus. Except during the festivals, however, the Eleians would not have much opportunity of using their hoarded silver: they were not favourably situated for lending it out, like the temple at Delos, and they had no extensive foreign trade. Even during the festivals, it is not likely that the visitors would want to draw cash from the Eleian treasuries. But there was a way in which they could dispose of the silver at a profit at such a time—by restriking it and selling it to the visitors in the form of souvenirs, that is, of coins which, so far as their economic purpose goes, might be more fitly called commemorative medals.

This purpose would explain the cross-use of dies to which reference has been made. If the Eleians wished

to sell their coins as souvenirs, it would be an advantage to produce as many varieties as possible, and to combine any dies that were available, new or old, for the purpose. Naturally also the best artists who could be found would be engaged, and encouraged to design new types or improve old ones: hence come the high standard of execution which marks the whole series, and the frequent modifications of the types. Further, the coins would presumably be sold at a price determined by their artistic merits rather than by their metal value: they would have no fixed local denomination, and carried no commercial guarantee: so that, if the purchaser of an Eleian stater took it home and then wished to use it in trade, it would only be taken as bullion; and this explains why these staters are so frequently punch-marked.

J. GRAFTON MILNE.

XII.

ON SOME DATES IN THE CAREER OF PISANELLO.

BETWEEN 1907 and 1913, the late Giuseppe Biadego published¹ at intervals his discoveries in the archives of Verona relating to the career of the great painter and medallist Pisanello. Owing to the writer's lamented death, not only were these researches discontinued, but the summing up of his conclusions and that systematic correction of certain of his earlier statements, which his later researches had rendered necessary, never saw the light. The result is that it is rather difficult to sort out the final conclusions from his six "Notes", and the actual facts discovered by him have been imperfectly digested.² I propose in these pages to describe what I believe to be the assured results of Biadego's investigations, and at the

¹ In *Atti del Reale Istituto Veneto* in six Notes, viz. (A) lxvii, 1907-8, 837 ff.; (B) lxviii, 1908-9, 229 ff.; (C) lxix, 1909-10, 183 ff.; (D) 797 ff.; (E) 1047 ff.; (F) lxxii, 1912-13, 1315 ff. I refer to these by the letters A-F and pages.

² In my latest contribution to the study (*Drawings by Pisanello*, Van Oest, 1929, p. 11), while making use of Biadego's discovery of the *terminus ante quem* for Pisanello's birth, I quite inexcusably ignored his proof, from the very same document, that the birth must have taken place at Pisa and not at Verona, and that his father was Puccio, not Bartolomeo, of Pisa. Other writers have failed to see Biadego's fifth and sixth Notes altogether. Dr. Borenius, in his new edition of Crowe and Cavalcaselle, is an honourable exception to the rule, but even he seems to have overlooked the new argument about the death-date.

same time to give my reasons for rejecting those of his conclusions which I think unsound.

First, then (A 839), the artist's name was not Vittore, but Antonio. He was the son (not of Bartolomeo da Pisa, as had seemed to be indicated by one of the documents first discovered by Biadego, but, as a subsequent discovery proved) of Puccio or Pucino di Giovanni di Cereto, who made his will in his house in Campo di San Silvestro in Pisa on 22 Nov. 1395 (D 803). His mother was Isabetta di Nicolò, a Veronese, who was born about 1363, and married first Puccio, then Bartolomeo, and finally Filippo da Ostiglia. Pisanello is actually mentioned in the will of the first of these husbands. The will itself has not been found, but it is cited in a deed of 8 July 1424 (E 1047 f.), in which Isabetta acknowledges to her son a debt of 600 gold ducats, which he had inherited from his father. He is described in this deed as *Anthonijs dictus Pisanelus pictor egregius*. Now a document (an *anagrafe* of the contrada di San Paolo in Verona) published earlier by Biadego (A 839) gave Pisanello's age in 1433 as 36 years, from which it had been concluded that he was born in 1397. That document, however, though it is unlikely to be wrong by more than a year or two, is not to be trusted for exactitude as implicitly as the will drawn up by a notary within a short time of the artist's birth and duly attested by witnesses; and it is therefore clear that Pisanello was born before 22 Nov. 1395, and born at Pisa. After Puccio's death, Isabetta married Bartolomeo. The couple, with their boy (and possibly an elder child, Bona), afterwards removed to Verona. As Biadego remarks (E 1049), it was very natural that

the child, son of one Pisan and stepson of another, should get the nickname of Pisanello. Bartolomeo died between 11 Sept. 1404 (D 799) and 23 Jan. 1409 (A 847), and Isabetta married a third time (D 800: the marriage contract is dated 6 Sept. 1414). Her third husband was Filippo da Ostiglia (a town on the Po between Mantua and Ferrara), who made his will on 22 Sept. 1425 (A 847). She herself died in 1442, before 13 Nov. (A 848).

The date of the death of Pisanello has been much disputed. There is, however, little doubt that only a distorted interpretation of the evidence can favour the view that he died before 1455. Biadego has found a fresh argument for this year (A 849 f.). The artist's brother-in-law, Bartolomeo della Levata, made his will on 14 July 1455, and recorded that a debt was owing to him, from Antonio and donna Isabetta, Antonio's mother, for more than 843 lire furnished to them at different times from 16 Nov. 1434 up to date. Now Antonio and Isabetta are both mentioned together in this will many times without any indication that both of them are not alive. Yet we have just said that Isabetta was dead by 1442. The explanation is that the two original debtors are named like a firm, although only one of them is still alive. If both of them were dead, the joint estate, by which the money was owing, would have been settled and the debt either paid or transferred to the heirs. It follows that Pisanello was still alive on 14 July 1455. He died between that date and 31 Oct. 1455, when Carlo de' Medici reported his death in a sentence which never should have been, and it is to be hoped will no longer be, regarded as ambiguous.

In his second Note (B 229 f.), Biadego discusses the date of the poem addressed by Guarino of Verona to Pisanello. He comes to the conclusion, on what seems to me to be unsound reasoning, that it was written, not about 1438, as generally supposed, but not earlier than 1427, and not later than April 1429, when Guarino left Verona for Ferrara. For he maintains that it was sent from Verona, basing this assertion on an interpretation of the crucial verses 15-22 which I consider inadmissible:—

Haud decet ut, celsos ornans heroas honore,
induperatorum faciem sagulumque vel arma
nobilitans, cunctis ut sit clamare necesse
"Sic oculos, sic ille manus, sic ora gerebat,"
principibus vitam divina ex arte perennem
magnanimis tribuens, iaceas neglectus ab omni
eloquio exclusus. Sinat hoc impune Minerva?
Non sinat hoc natale solum quod laude celebras.

He surprisingly takes *hoc natale solum* together—"this (thy) native soil"—and argues that Guarino could not have written so if he had been long absent from Verona and become almost a citizen of Ferrara, as was the case in 1438. But *hoc* is surely here the object of *sinat*, just as it is in the previous verse. And whatever may be said about Guarino's attachment to Ferrara, he always remained "Guarinus Veronensis", and would not cease to emphasize his Veronese origin, however long his exile from his native place. However, if *hoc* is properly translated, this point does not arise.

It may be granted to Biadego that *induperatorum* in v. 16 does not necessarily refer to the Emperor Palaeologus, but means simply condottieri, while *principibus* may allude to the Doge of Venice, and not to

an Este, a Visconti or a Sforza. But even if *indupratores* means Emperors, the reference is probably less to Palaeologus than to Frederick Barbarossa, for Pisanello's fresco in the Ducal Palace represented that Emperor with his son Otto kneeling before him and pleading the cause of the Venetian Republic.

However, there is another argument urged by Biadego for the early date of this poem. It mentions a picture of St. Jerome (vv. 48 ff.):

Singula quid refero? praesens exemplar habetur.
nobile Hieronymi munus quod mittis amandi
mirificum praefert specimen virtutis et artis.

Now there is extant a letter from Guarino, written on the 20th January in a year which is not given, but which Biadego establishes as 1427. It is addressed to Venice, to Francesco Giuliani, and contains a request to remember the promised St. Jerome: *et imaginem beati Jeronymi memoria tene, quam abs te mihi promissam memini*. There is no mention of Pisanello in connexion with the *imago*, but Biadego infers, with less, as it seems to me, than his usual caution, that this *imago* is the very St. Jerome mentioned by Guarino as the work of Pisanello, that Guarino's poem was written on receipt of this picture (the possibility of the *imago* being anything but a picture is not considered), and in thanks for it, and finally that the artist was in Venice at the time, i.e. in 1427.

I am bound to say that these conclusions seem to me to require a great deal more support than they have got. And, as a matter of fact, in a later note (C 187), Biadego himself comes to the conclusion that it is unlikely that Pisanello was working at Venice after 1425. For he is able to quote entries from

records at Mantua showing that the artist was living at the latter place as early as 1422 (D 801-2: he is called *Antonius dictus Pisanellus quondam Pucii de S. Paulo Verone habitator de presenti Mantue*); in 1423, 10 Aug., the last four words do not appear in the description, but, as Biadego observes, that does not prove that he had left the city. In 1425 (C 185) he was salaried (*provisionato*) by Lodovico Gonzaga, and it seems that he remained more or less closely attached to the Mantuan Court from this time right down to 1447, when he modelled the medal of Cecilia Gonzaga. Of course that did not prevent him from doing a great deal of work for Ferrara and elsewhere at the same time. But it is very unlikely that he was working on an important commission to the order of the Venetian authorities after 1425; perhaps we may even push the date back to 1422, when we first find him living at Mantua, though not necessarily in the pay of the Court.

If Pisanello was born in 1395 or just before, he must then have completed the fresco in the Ducal Palace by the time he was twenty-seven or a little more. Is there anything surprising in that? Gentile da Fabriano's work there is supposed to have been done between 1409 and 1414; it is said that the great hall was finished in 1415. But that does not necessarily mean that all the paintings were completed, though some of them were attracting visitors. Pisanello, if he did not actually work there with Gentile, may have followed soon after. It looks, therefore, as if the Venetian fresco may be dated in the decennium from 1415 to 1425, and most probably about the middle of that period.

Biadego, in the course of his Notes (B 242 f., F 1315 ff.), goes into the question of the date of the *Annunciation* in San Fermo, which he wishes to date much later than most people, i.e. about 1435-40. This is very difficult to accept, in view of the apparent immaturity of the work; it seems to show a much earlier stage of development than the fresco of *St. George* in Sant' Anastasia. But if Biadego's documentary evidence is rightly interpreted, the art-critics' ideas of development must be sacrificed. So let us see on what he bases his argument. First, on the fact that on 4 May 1422 Nicolò Brenzoni (on the wall around whose monument the fresco is painted) by his will ordered that he should be buried *apud ecclesiam Sancti Firmi Maioris Veronae*. This, Biadego says, means "outside the church". I hesitate to question the authority of so good an archivist as Biadego, but would venture to suggest that *apud* does not necessarily mean "outside", but merely "at", whether without or within the walls.^{2a} If the monument was not yet in existence, perhaps the site was not yet secured and that would be a very good reason for using a colourless word.

Nicolò was dead before 6 July 1422. The next written record is of 18 March 1439, when Nicolò's son Francesco (who was dead by 6 April of that year) *corpus suum seppelliri iussit in ecclesia S. Firmi Maioris de Verona ordinis Minorum in monumento suo*. This (like other later references) certainly means the

^{2a} Such a phrase as *datum Romae apud S. Petrum* (Papal brief of 1527, in Bertolotti, *Art. Lomb. in Roma*, i, p. 287) may not be conclusive; but in *actum Rome ad sanctum Petrum apud capellam Regis Francie* (1521, *ibid.*, p. 130), *apud* can hardly mean outside.

existing monument inside the church. Between these two written records, however, comes a sepulchral slab in the Museum of Verona, of uncertain provenance. It is inscribed as having been set up over the tomb of Nicolò Brenzonario by his son Francesco in 1426. Biadego thinks that it came from the tomb *apud ecclesiam* ordered in 1422, and that the tomb inside the church, as we now see it, was erected not by Francesco the son, but by Giacomo the grandson, of Nicolò. A late inscription on the monument, by mentioning Giacomo first, lends some colour to his claim to be the erector. But even so, since he was of marriageable age as early as 1418, there is no reason why he should not have been in a position to begin the tomb soon after his grandfather's death, even though his father was still alive. If the monument was delayed, as so often happened—after all, we know that the sculptor Rosso did not leave Volterra until in or after 1424³—Francesco in despair may have put up the modest slab which bears the date 1426. Then, when the grand monument was erected, the slab would be removed. This would be done whether it was outside the church or within; and this too would account for its wandering from the church, to turn up eventually in a dealer's hands.

The date of the beginning of the fresco (which could not be begun until the sculptured monument

³ Did he stay there long enough to hear San Bernardino of Siena preach in Advent 1424? The question is not irrelevant, in view of what we shall discuss presently, for it was at Volterra, according to one account, that the Saint inaugurated the practice of exhibiting the sacred trigram on a tablet, which was afterwards preserved as a sacred relic.

was at any rate well advanced) is thus 1426 at the earliest.

But Biadego observes that on the monument is carved the trigram of San Bernardino, according to a custom which, he asserts, was not introduced until 1427. The monument therefore, he argues, cannot be earlier than 1427. Even so, there is time for the fresco to have been completed before 1431, when we find Pisanello in Rome. Gentile da Fabriano died in 1428, and it is sometimes supposed that Pisanello followed him immediately at the Lateran. But there is no proof of this.

However, let us examine Biadego's statement about the date when the trigram and motto of San Bernardino were introduced on buildings. It is true that when in 1427 the Saint was summoned to Rome to answer the charge of heresy, the Pope forbade him to exhibit his tablets until he should have cleared himself. It is known that he triumphed over his enemies, receiving permission to show everywhere the Name of Jesus, "*dont les lettres sont dès lors inscrites sur les portes des églises et des maisons*".⁴ But this by no means proves that they were not so inscribed before then; indeed the whole story shows that the Pope's decision merely legalized a practice of long standing. It is, perhaps, something more than a coincidence that the Saint was preaching at Verona itself, in the Cathedral, from 1 Nov. 1422 to 17 Jan. 1423. Throughout this mission he was propagating devotion to the Name of Jesus. Is it not possible that

⁴ P. Thureau-Dangin, *Saint Bernardin de Sienne*, 5th ed., Paris, 1897, pp. 118-19; Eng. transl., 1911, p. 106.

he had already then designed the famous symbol of the trigram in a halo surrounded by the motto "in nomine Jesu omne genu flectatur"? Is it too much to assume that a monument ordered in May of the year at the end of which he came to preach at Verona, a monument to be erected in a Franciscan church, might, when it came to be erected, have this symbol carved on it, even before the Pope's decision of 1427?

I conclude, therefore, that it is reasonable to accept a date between 1426 and 1431 for the *Annunciation* in San Fermo. This certainly squares with what critics have felt about its style, and with what we know about the movements of the sculptor whose work it frames. The traditional date is 1430.

Other documents published by Biadego concern rent paid by Pisanello to the Monastery of S. Maria in Organo at Verona in 1435, 1445 and 1446 (D 800-1; A 845). During these ten years, however, fell the troubles in the course of which the artist, as a sympathiser with the enemies of Venice, was exiled from his native place. He was among the *fuorusciti* of 1438. On 17 Nov. 1439, when Piccinino entered Verona, he returned, only to retire three days later when Piccinino was expelled. On 11 May 1440 (F 1327) he is found at Milan⁵ giving his report of the conquest and loss of Verona before the ducal court. This date is important, in connexion with the medal of Filippo Maria Visconti, which may have been modelled at this time, and is indeed generally dated to about 1441. The Torriani

⁵ This document was discovered by G. Biscaro, *Arch. Stor. Lomb.*, Ser. IV, vol. xv, 1911, p. 172.

Chapel in Sant' Eustorgio at Milan was transformed about 1440; and if Pisanello had anything to do with the frescoes on its ceiling (which is exceedingly doubtful) he might have done it at the time of this visit.

The list published by the Council of Ten on 7 Feb. 1442, naming Pisanello among other *fuorusciti* who had not yet presented themselves to establish their innocence, and to whom grace was extended to the end of next March, has long been known. Biadego has found him mentioned (A 842) in a similar list of an earlier date, viz. July 1441. He did eventually go to Venice, but not until 17 October (F 1329).⁶ He nearly had cause to rue his action. The public prosecutor demanded that he should have his tongue cut out for speaking ill of the Republic with Lodovico Gonzaga, and that he should be banished from Venetian territory. However, he was only confined to Venice, forbidden to sell his property without licence of the Council, and threatened with total confiscation if he broke bounds. On 21 November, as a new document shows (A 842), he obtained leave to go to Ferrara on business for two months. But he was still excluded from Verona and its territory, as also from that of the Marquess of Mantua. He did not actually take his leave until 15 February 1443 (A 842).

In the same year he seems, according to Biadego, to have found grace with the Venetian authorities and to have been allowed back to Verona, for in 1443 we

⁶ This document was found by Ludwig, and published by Bode and others in *Ital. Forschungen*, iv, 1911, pp. 120-1. "7 Octobris" in Biadego's reprint is a mistake.

find him (A 845) inscribed in the *estimo* of S. Paolo of that city. He is registered as *Pisanellus pictor cum matre*. Isabetta had already died, before 13 November 1442; but these registers were based, at any rate partly, on work done in the previous year (A 848). So Biadego argues. But it may well be observed that if the *anagrafe* on which this *estimo* was based, made in the year 1442, when there is no question of Pisanello being at Verona, contained the entry *Pisanellus cum matre*, then the occurrence of these words in the actual *estimo* of 1443 is hardly a proof that he was actually in Verona in *that* year. So that it is not certain, though it is possible, that he returned as early as 1443. And, as a matter of fact, we have letters proving that he was in Ferrara not only on 3 March, but on 11 Sept. and 6 Nov. 1443 and 11 March 1444.⁷ But in 1447 he is registered alone (A 845) in the same *contrada*, where he had been paying rent since 1445 to S. Maria in Organo; so that whether actually all the time resident in Verona or not, he was certainly effectively domiciled there by 1445, in the same place as he had been ten years before. Most of the datable events in his career from 1443 to 1448, when we know that he went to Naples, are connected with Ferrara and Mantua, though he may have had periods of residence elsewhere, as at Rimini. Those who wish to date the fresco of *St. George* in Sant' Anastasia to the middle of the forties are therefore free to do so; but the earlier date, between 1432 and 1438, still seems to me preferable.

⁷ Vasari, *Vite*, I, *Gentile da Fabriano e il Pisanello*, ed. Venturi, Firenze, 1896, pp. 48-9.

It is to one of these later periods of residence at Mantua that we owe the Gonzaga medals, including, as on reconsideration of the evidence I venture still to believe, that of the old marquess Gianfrancesco. If the arguments adduced by Jean de Foville⁸ are sound, we must ascribe that medal to 1439. Certainly there is no chronological objection to his view. For he has removed the objection which was based on the title borne by the Marquess, *Capitaneus maximus armigerorum*. Gianfrancesco was Captain-General of the Venetian troops from 1433 to 1437, but not later. Since nobody proposed to date the medal earlier than the earliest known medal of Pisanello, the Palaeologus of 1438, it was generally agreed that the piece was posthumous, in which case the title with which the Marquess had once been adorned might well have been used. However, the title has no connexion with the Venetian command; it is the hereditary title of *capitano generale* decreed in 1328 by the Republic of Mantua to Gianfrancesco's ancestor Lodovico. So that this title gives no help in fixing the date of the medal. It may belong to any time when Pisanello was in touch with the Mantuan court. Incidentally, it may be observed that had Foville known of the extent of Pisanello's relations with Mantua, as revealed by Biadego's researches, he would not have limited the date of the medal to 1439. The medal of Piccinino seems to date from 1441; at any rate it is not later. It is unlikely, says Foville, that the medallist, standing in such close relations with both Piccinino and the Marquess, should have made the medal of the one and

⁸ *Revue Numismatique*, 1909, pp. 406 f.

not of the other. That, however, is a slippery argument; it takes two to make a portrait, and either sitter or artist may be unwilling.

We are left then to considerations of style. Foville emphasizes the resemblance between the reverses of this and of the Palaeologus of 1438. Both, it is true, have a pair of horsemen, one seen in profile, the other foreshortened from behind. But there the resemblance stops. On the other hand there are several features in which the Gonzaga medal resembles later ones. The horses are of exactly the same type and build as that on the medal of Lodovico Gonzaga; a symbol is placed high up in the field, like the sun and sunflower on that piece; the signature is placed high up in the field, used decoratively as part of the design, a feature found on no medal earlier than the marriage-medal of Leonello d'Este of 1444; the inscription on the obverse is arranged in exactly the same way as on Lodovico's medal, and the medal of Leonello just mentioned is the earliest to show this arrangement. Finally there is no trace of archaism in the lettering, such as we find on the medal of Filippo Maria Visconti, and even, to a slight extent (the letter A with a dash to the left at the top), on the Piccinino. Thus on stylistic grounds there seems to me to be every reason for assigning a comparatively late date to this medal. Gianfrancesco died late in 1444. It may have been made just after his death, as a pendant to that of his son, which it so closely resembles. The description *Primus Marchio Mantue* certainly acquires added force if a second had already succeeded to the title. Lodovico, like his father, bears the hereditary title of *Capitaneus armigerorum*. This is not

a reference to his Florentine command in 1447 and 1448. I take it, therefore, that both medals may safely be dated to 1445. They fit in admirably with that stage in the medallist's development, as shown in the marriage medal of Leonello d'Este of the year before.

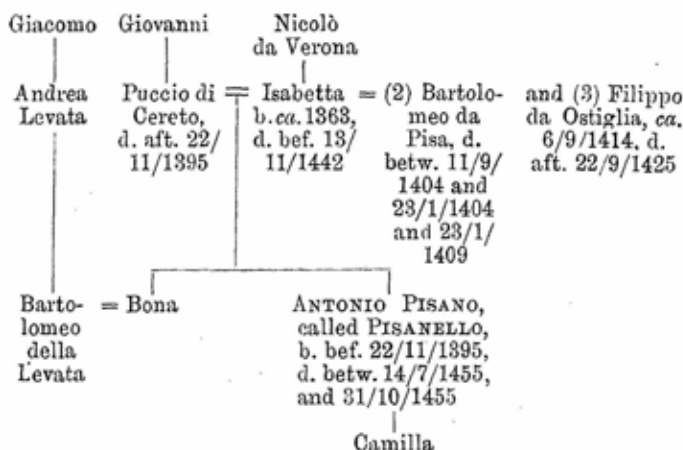
Among the interesting points that have emerged, thanks to the discovery that Pisanello's baptismal name was not Vittore but Antonio, is the fact (D 797) that the poet Lodovico Carbone of Ferrara was in possession of a portrait by him of Leonello d'Este. Carbone mentions it as the work of Antonius Pisanus in a Latin oration of 1460. It should, however, be understood that we are not justified in jumping to the identification of Carbone's portrait with that now in the Morelli Gallery at Bergamo. Pisanello must have painted more than one likeness of his patron.

Last among the matters of interest to students of the great medallist that have recently come to light, I may perhaps be allowed to refer to a forthcoming article in *Pantheon*, in which I attempt to show that the marble relief at Lucca representing Gian Pietro d'Avenza, and long recognized as reflecting the style of Pisanello, was based on a medal which is known to have been in existence in 1459.

On p. 196 I give a stemma showing the relations of the artist as established by Biadego's researches.

G. F. HILL.

STEMMA.



XIII.

ON A SILVER STANDARD FOR THE COINAGE OF EDWARD I

By the kindness of the Deputy-Master of the Mint and the Curator, Mr. C. F. Barrett, I was enabled to show the Society last session an electrotpe of the remarkable and unique standard now in the Royal Mint. The illustration shows one face of the standard which bears impresses from the dies used for the long cross penny reading **PHILIP OM LVND**. Philip de Cambio was appointed a moneyer in 1278, and he only struck one type of coin, that represented on the standard. This is the latest coin of the long cross issue that we know of. In 1279 the type was changed and the moneyers' names were removed from the coinage. This standard, then, was made in 1278. It is a roughly rectangular piece of metal about 2 in. long and about $\frac{3}{4}$ in. wide and thick and weighs 7.315 oz.

On inquiry at the Mint for further particulars Mr. Barrett kindly sent me a letter from which I quote. "Remarks made by Roberts-Austin (*Cantor Lectures on Alloys used for Coinage*, by W. Chandler Roberts, F.R.S. London, William Trousce, 1884):

"Until the year 1842 the trial plates were kept in the Pyx Chapel in the cloisters of Westminster Abbey, where certain assay pieces of gold and silver, with ancient memoranda relating to them, were also found. One of these pieces is the extremity of a bar or ingot of silver which has its upper surface rounded and imperfectly impressed with the dies of a coin of the time of Henry III (1216-1272).

"Mr. Black, formerly Assistant Keeper of the Public Records, considered that this had been employed at the trial of the Pyx and that it is probably the remains of the oldest standard piece which has been preserved. It proved on assay to contain 921.0 of silver and 2.0 of gold, a result which points to its representing the new coinage introduced in 1267."

Mr. Barrett thought that a further assay of the bar was unnecessary in view of the above information. He was also good enough to inform me that the specific gravity of a long cross penny which I took to him "approaches that of the bar but is slightly less", and he explained that this was probably due to the condition of the surface of the coin sent and the difficulty of determining more accurately on account of the thinness of the coin.

Only one remark is necessary on the above quotation, and that is to point out that the date 1267 is incorrect. There was no new coinage then, and the date of Philip's appointment (unknown in 1884) is certain.

The bar shows clearly where pieces have been clipped off it at the upper part, no doubt for purposes of assay.

The Red Book of the Exchequer gives us some information in reference to standards. One entry refers to the orders for making the long cross coinage when it replaced the short cross coinage in 1247. The order then given was for two standards to be made each of the weight of ten shillings, one of pure silver, the other of the alloy used for striking the coins. These were to be kept in the Treasury at Westminster under the seal of the Mayor of London. There were also ordered at the same time other stan-

dards of the weight of forty pennies each, of the same two qualities of silver, to be sent to the various mints



throughout the country (*Red Book of the Exchequer*, pp. 1073-4).

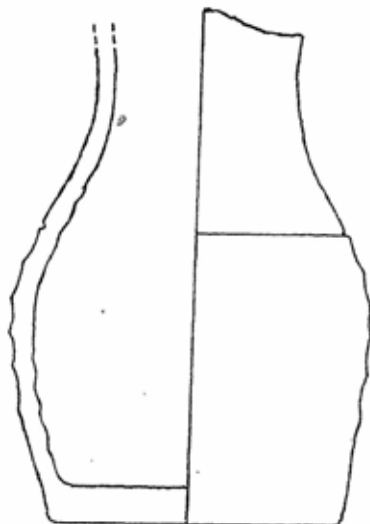
The second reference concerns the making of the coins bearing Edward's name to replace the "old money" (long cross). Here a standard is ordered, which is to bear the stamp of the old die and the new. No weight is stated. If the description in the Red

Book of the Exchequer be correct, the standard at the Mint cannot very well be that ordered for the new Edwardian coinage as it only bears the stamp of the old money. It is quite out of the question that it can be one of the standards ordered in 1247 as Philip did not take office until 1278. The weight again is considerably more than ten shillings. The type of coin struck by Philip at London was also made by Renaud his predecessor, and at Durham by a moneyer named Robert. Also at Bury by Jocus the goldsmith who was appointed moneyer in 1276 in succession to John de Burnedisse, who also struck in this type, so that the last type of long cross coin (Edwardian) was in issue from 1276 (and probably before) until 1278. There would appear to be no reason whatever for making a new standard in 1278, more particularly in view of the fact that a new coinage was probably in contemplation. My own feeling about it is that it is the standard for assay against the new Edwardian coinage, in spite of the fact that it only bears the impress of the old money. The coin illustrated is from the same obverse die as was used to stamp the standard.

L. A. LAWRENCE.

XIV.

THE DURHAM HOARD OF EDWARD I-III.



THE coins described below were unearthed by two workmen on May 10, 1930, while erecting a fence in the garden of Mr. Peter Lee, Nevilledale, Durham. They were contained in an earthenware jar four feet from the surface. The jar was broken by a spade. The workmen divided the coins and took them home. The coins were recovered and the pieces of the jar were also found. The jar was of coarse grey paste and measured $5\frac{3}{8}$ in. in height. The coins and the jar were sent to the British Museum. The jar, or as much of it as could be found, was joined up at the Museum. The earliest coin in the hoard was the penny of Edward I, Class I, dated to 1279, and the latest the

Durham penny, no. 49 in the list, which must be placed just before 1361. The coins numbered 547 and were as follows:

Pennies of Edward I and Edward II . . .	162
" of Berwick . . .	3
Groats of Edward III, London (60), York (8)	68
Half-groats of Edward III, London (36), York (9) . . .	45
Pennies 1344-1351, Florin type, London (21), Canterbury (1), York (7) . . .	29
Halfpennies, 1335-1344 (2), 1344-1351 (1) .	3
Pennies, London 1351-1361 . . .	17
" York . . .	51
" Durham . . .	151
Scottish pennies, Alexander III . . .	3
" half-groat, David II . . .	1
" pennies, . . .	6
Continental sterlings:	
Gaucher II de Châtillon, Count of Porcien	3
Valeran II, Count of Ligni . . .	1
John the Blind, King of Bohemia . . .	1
John III, Duke of Brabant . . .	2
William of Hainault, Bishop of Cambrai	1

The coins of Edward I and Edward II show no new varieties. The mints were London, Canterbury, Bristol, Bury St. Edmunds, Durham, Newcastle, York, and Berwick. The fifteen classes as arranged by Mr. Earle Fox and Mr. Shirley Fox were represented on London coins, except VI, VII, XII, and XIII; Canterbury only by III, X, XI, XIV, and XV; Bristol by II, III and IX; Bury by IX, X, XI, XIV, and XV; Durham by II, III, IX, X, XI, XIV; Newcastle by XI; York Royal mint by III and IX. Class VII is but rarely found, which accounts for its absence. Classes VI and VIII are uncommon, and XII and XIII are variants rather than classes.

The hoard contained no pennies of Edward III struck

before 1344. The issues were small and the coins are now very rare. Two halfpennies of London represented the large issues struck between 1335 and 1344.

Florin-type pennies, 1344-1351, were present from the mints of London, Canterbury, and York. Durham and Reading also issued this type of coin, but none of these were included in the hoard. The latter are well-known rarities. Why there were no coins of this type of Durham in the hoard it is difficult to surmise, as some of these Durham pennies are fairly abundant. There was one specimen of the common Florin-type halfpenny.

The remaining English coins were all of the time of Edward III, and are to be dated between 1351 and 1361. Groats, half-groats, and pennies both of London and York were present, as well as pennies of Durham. There were very few halfpennies struck during this period; their rarity may account for their absence here. A brief description of the classification of these pre-Treaty coins is appended. The first six classes, A to F, have been fully described in *Num. Chron.* 1926 and 1929. A brief *résumé* is here given, and the chief characteristics of the long Series G are added.

Series A: pennies only in silver, closed α and ϵ , round R.

Series B: open C and E, square M and N.

The characteristics of Series C are: the initial cross, square in outline, the outer points of the limbs meeting, $\boxtimes$, and well-formed closed α and ϵ , reversely barred N, round Ω , R with wedge-shaped tail.

Series D: the same initial mark from a purposely damaged punch. α and ϵ at first as in Series C, later

narrow and ill-formed; finally square topped. N reversely barred, normally barred or unbarred; R a well-formed letter, with tail not wedge-shaped.

Series E: new initial cross formed of four equilateral triangles; the last Q and Q of Series D (sometimes broken below); N as in Series D, but later unbarred; R as in Series D, then with a vertical tail with a bifurcation below.

Series F: initial mark Crown; new letter irons; the flat-topped Q and Q disappear (sometimes broken above); unbarred N; a new R.

Series G, var. *a*: same lettering; the three variants of N; an annulet under the bust and in one quarter of the reverse.

Series G, var. *b*: a new bust, no annulet, unbarred N; *rev.* annulet as before; Q and Q sometimes broken in the upper part of the back.

Series G, var. *c*: the same; *rev.* saltire in one quarter, saltire stops.

Series G, var. *d*: the same; *rev.* annulet usually under DOII; T·T·S with pellet between T and S; Q and Q, when broken, have the lower portion of the letter removed.

Series G, var. *e*: pellet over crown; *rev.* annulet under DOII; T·T·S with two pellets (these two features continue to the end).

Series G, var. *f*: no pellet, all arches fleured, large annulet stops.

Series G, var. *g*: saltire stops both sides; the latest varieties have an open E.

A few of the coins merit more attention than can be given them in the lists. One example of the mule, Series B/C, was present, with open C and E on the obverse,

closed letters on the reverse. Most of the obverses of Series B are found muled with reverses of Series C. This coin, no. 1, starts the obverse legend EDWTR D GRT. The EDWTR soon became EDWTRD, which is the normal reading on the groats; D GRT was changed to DEI G, DI G, and finally to D G. Specimens with all these readings were present, see nos. 2, 3, 4. The other groats of Series C and D show small die varieties. No. 23, however, a mule between Series D and E, is rather more interesting. There are two annulet stops colon-wise after FRTHQ,¹ and on the reverse an M replaces the first N in London, LONDON. The readings LOMDOM, where both letters are so replaced, and others in which the second N only is changed, frequently occur on the groats in our cabinets. The M is very carefully made in all cases. The meaning of the alteration is still unknown. Series D, E, F, and G all present examples of it on groats, and F and G on pennies. Half-groats do not show this variation.

The hoard illustrates the constant use of A for Å, particularly on coins of Series D; groats and half-groats with this peculiarity are noted in the lists.

The hoard is interesting in providing many coins of Series E in which the peculiar form P for R occurs. Among the groats nos. 24 and 25 show it on the obverse, half-groat no. 25 shows it on the reverse. There are many examples on Durham pennies in the list. This form of R only occurs on Series E. Coins bearing it only infrequently occur in collections. It is known to be an early form; the half-groat just referred to shows this, as the obverse belongs to Series D.

¹ Half-groat no. 20 shows the same two annulets.

An unusual form is occasionally found for the first letter of the king's name. It is a square **E** and appears to have been deliberately altered from a round **E**. This form is only used in this one position, and only on coins of series D and E. In Series D it occurs on London and York half-groats and Durham pennies, on Series E on London groats and pennies. The hoard shows it on a muled groat E/F, no. 40, and on the muled half-groat D/E no. 25. Its occurrence on groat no. 40, where the reverse has the new initial mark, the Crown, is explained by the old obverse die being available without interfering with the privy mark, which must therefore have been on the reverse.

Groats nos. 28 and 29, belonging to Series E, are of more than ordinary interest. The bust is unlike that on any other coin; the initial mark is not in the least like any other cross on the coinage, and the same may be said of the lettering. In a word, a set of irons was used for the production of the obverse dies which does not appear to have been used for making any other coins of Edward III. These coins mostly bear reverses which are characteristic of Series E, although identical reverse dies have not yet been identified; two coins, however, no. 27 in this list and a coin in the British Museum, have the peculiar lettering on both sides. The coins are of considerable rarity. Three different obverse dies are known. Of the four or five coins known, three reverse dies have the readings LONDON, LONDON, and LOMDOM, all known readings of Series E.

The London penny no. 10 is a new variety. The obverse initial mark is a Crown (Series F), and united with this obverse is a reverse with a saltire among the

pellets under TTS, thus producing a mule F/G c. Some three years must have elapsed between the cutting of the obverse and reverse dies. Still more interesting is the Durham penny no. 12 *a*, which appears to be a mule between Series D and Series G. Unfortunately the coin is badly struck and badly preserved, but the initial mark certainly looks like the cross used on Series D, and the R of Edward, the only one visible, would appear to bear out the conclusion. The reading DVRÆMÆ is unknown on Series D, E, and F, but is the regular reading on the earlier issues of Series G. If this coin be really a mule, four years at least must have elapsed between the making of the obverse and reverse dies.

The Durham pennies nos. 23 to 27 all present a bust of the king which looks as if the irons used for their production were engraved by an unskilled hand. The lettering is normal. The series to which they belong are E, F, and G, and the list shows that they are mostly mules.

The Durham penny no. 47, a new variety, has a saltire cross among the pellets under TTS. This agrees with the London coins of Series G c, and it is the first coin of a provincial mint showing such a mark. No. 49 shows a late open E on the reverse. The interest of the coin lies in this letter because it is a connecting link with the earliest form of treaty coins which bear the same unusual letter. It is undoubtedly the latest English coin in the hoard. The Scottish coins of David II, who died in 1370, all appear to be of issues previous to 1360; the Durham penny, therefore, suggests the latest date for the burial of the hoard.

Some reference to coins which might have been

expected in a find of this sort may be of interest. There were no examples of Series A, nor of Series B. Only pennies of the former (apart from gold) are known. They were struck at London and Durham, those of Durham are rare. One might reasonably have expected to find groats and half-groats of London with the open G and E and a Roman M. The rarity of the coins is greatly over-estimated by collectors and would not seem to account for their absence. Among non-English coins it may be noted that there were no Irish pennies of Edward I, which are rarely absent in this sort of hoard.

In some cases the weights of the coins are inserted in the list. It was hoped by the weight of the coins to distinguish the various issues of the Florin-type pennies. Unfortunately there were not enough of these coins in the hoard to give an average for each type. It will be remembered that the earliest coins were ordered at 22 grains to the penny, then 20.3, and finally 20 grains. The later coins which have been weighed are all 18-grain pennies, and it will be noted how the weights of individual specimens vary. Some are as light as 15.6 grains and some as heavy as 20 grains. These differences may possibly be explained by the allowance of a certain number of heavy and of light coins in the pound weight. No doubt in some cases the loss of weight is due to wear and tear in circulation and to clipping. Some coins, however, obviously clipped, are well over the normal weight. The clipping in these cases was probably done at the mint.

The jar and the large majority of the coins were purchased for the British Museum. Some of the remaining coins were selected for the Durham Museum.

EDWARD I AND II.

Pennies.

	No. of coins.
London: I (2), ² II (1), III-II (3), III (16), IV (4), ³ V (1), VIII (1), IX (5), ⁴ X-IX (1), X (37), ⁵ XI (10), ⁶ XIV (2), XV (1)	84
Canterbury: III (6), X (24), ⁵ XI (5), ⁶ XIV (4), XV (1), illegible (2)	42
Bristol: II (1), III (5), IX no star (1)	6
Bury: IX no star (1), X (1), XI (1), XIV (1), XV (2)	6
Durham: II (3), III (2), IX Bek (5), K $\overline{R}$ (2), XI Kellawe (1), XIV Beamont (3)	18
Newcastle: XI no star (1)	1
York Royal mint: III (4), ⁷ IX no star (1)	5
Berwick:	3
	165

² One has unbarred N's on *obv.*⁴ With and without stars.⁵ $\overline{GDWTRD}$, $\overline{GDWTR}$, $\overline{GDWTK}$, $\overline{GDW}$. One has pellet after h $\overline{YB}$. Twenty-six pennies of London Edw. I, Cl. X, weighed 481 grs.⁶ $\overline{GDWTR}$, $\overline{GDWTK}$.⁷ One with collar of class *b*.³ One has three pellets on neck and one pellet before $\overline{GIVI}$.

No. of
coins.

2

EDWARD III. Issues of 1335-1344.

London halfpennies, 1335-1344

1344-1351 (Florin-type).

Issues of London pennies

+EDWTR REX TIGL (DIS) hYB thin letters	CIIVITTS LONDON normal letters.	Wt. 18.3 grs.	1
+EDWTR TIGL oDIS hYB normal letters	CIIVITTS LONDON	Wts. 18.6, 20.0 grs.	2
+EDW R TIGL DIS hYB normal letters	CIIVITTS LONDON	Wts. 15.0, 15.9, 17.7, 17.9, 18.5, 18.7, 19.0, 19.3, 19.7, 20.4, 20.5 (2) grs.	12
+EDW R TIGL DIS hYB	CIIVITTS LONDON	Wt. 18.0 grs.	1
+EDW R oN	N	Wt. 20.6 grs.	1
oN	N	Wts. 20.7, 18.2 grs.	2
oN	N	Wt. 19.0 grs.	1
N	N	Wt. 19.1 grs.	1
		Double struck	1
Canterbury penny	CIIVITTS CANTOR	Wt. 20.0 grs.	1
+EDW R TIGL DIS hYB	CIIVITTS EBORACI	quatrefoil in centre.	7
York pennies		Wts. 17.3, 17.5, 18.0, 18.7, 18.9 (2), 19.2 grs.	
+EDW R TIGL DIS hYB	CIIVITTS LONDON (worn)		1
London halfpenny			
+EDWTRDVS REX TR			

London Groats.

For description of the classes see *Num. Chron.*, 1926, pp. 417 ff., 1929, pp. 106 ff.

Mule B/C.

	Mule B/C.	No. of coins.
1. D GRT ^o Annulet stops, none before GRT	POSVI ^o /DEAV ^o	1
Series C.		
2. DEI ^o G hYB ^o	POSVI ^o /DEAV ^o	1
3. DI ^o G	One has no stops on reverse.	5
4. Top arches fleured. D ^o G	POSVI ^o /DEAV ^o	7
5.	POSVI ^o /DEAV ^o	2
6.	POSVI ^o /DEAV ^o	1
7. hYB ^o	POSVI ^o /DEAV ^o	1
8. Top arches not fleured.	POSVI ^o /DEAV ^o	1
Series D.		
9. Barred H's both sides. FRT ^o , hYB ^o	No stops.	1
10. DhYB	POSVI ^o /DEAV ^o	1
11. Obv. unbarred H, rev. H D ^o hYB	POSVI ^o /DEAV ^o	1
12. RDX ^o THUGL 7 D ^o hYB α for θ		1
13. RDX ^o THUGL ^o 7 DhYB "		1
14. RDX ^o hY ^o B "		1

No. of coins.									
1									1
1		TAS A barred.							1
		POSVI/DEVM	N N in London.						1
			N N in London.						1
			N N (different die)						1
		POSVI/DEVM							1
		POSVI/	N N						1
		POSVI/DEVM	N N A for A						1
									1
									1
									1
									1
									1

1			
2	Two from same dies.		1
1	N N in London.		1
1	N N		1

		No. of coins.
28. ^s With unusual bust and lettering. °DhY H	POSVI°DEVΩ normal lettering. H II in London. V nicked. No stops between ΕΩ and ΩΕV	1
29. ^s With unusual bust and lettering. D°hYB H	POSVI°/ Large letters. H II in London. V not nicked.	1
30. Normal bust. °DhYB' Normal H	POSVI°/ H II in London.	1
31. °DhYB		1
32. °DhYB Flaw over crown.	POSVI°DEVΩ	1
33. Without flaw.		2
34. °D°hYB	POSVI°/	1
35. °D°hYB	/°DEVΩ	1
36. °D°hYB No stop after G	/°DEVΩ	1
37. No stop after last four words.	/°DEVΩ	1
38. °DhYB Lis on breast.	POSVI°/	1
39. Α broken below. °DhYB Trefoil fleurs replaced by fleur-de-lis.	POSVI°/ Fault in pellets under CIVI	1
40. Square Ε in Edward. °DhYB	Mule E/F. i. m. crown. /°DEVΩ	1

^s See *Nim. Chron.*, 1929, Pl. III. 7, 8, for obverse dies of nos. 28, 29.

Series F.		No. of coins.
41. i. m. crown. °D°hYB	/°DEVΩ Inner legend begins under POSVI	1
42. FRKCIIDhYB	" "	1
43. GOVTRD °DhYB	No stop between POSVI and DEVΩ	1
Series G, var. a.		
44. °D°hY ° under bust; H; all arches fleured.	/°DEVΩ H H Annulet under CIVI ⁺	1
Series G, var. b.		
45. °DhYB H No annulet under bust; top arches not fleured.	POSVI/DEVΩ Barred K in TKS; annulet under TKS ⁺	1
46. No stop after TNL L °D°hYB	/°DEVΩ Annulet under LOH; Q Q broken above $\frac{+}{+}$	1
Mule Gb / Gf.		
47. No stops after last four words. Q Q broken above.	POSVI°/ A pellet between the letters of T.K.S; annulet under DOU ⁺	1

London Half-groats.

Series C.

Series C.		No. of coins.
1. All arches fleured.	POS/VI·DENV·/ÆDIVT/OREM LONDON CIVITAS	1
2. " "	FRÆICI°	1
3. " "	FRÆICI	1
4. " "	FRÆIC°	2
5. " "	FRÆIC°	1
6. " "	FRÆI	1
7. Illegible.		1
8. Top arches not fleured.	POSV/ Double struck.	1
9. " "	POSV/I·DENV·/ÆDIVT	1
10. " "	POS/VI·DENV·/ÆDIVT/	2
11. " "	No stops.	2
12. " "	POS/VI·DENV·/ÆDIVT	2
13. " "	POSV/I·DENV·/ÆDIVT/	1
14. " "	POS/VI·DENV·/	1
15. " "	POS/ No stops.	1
16. " "	POS/ No stops.	1
17. " "	POS/VI·DENV·/ÆDIVT	1

No stops between these.

No. of
coins.

Mule C/D.

18. ⁹⊙EDWTRDVS FRTUIC^o ⊕ POS/VICDGV^o/TDIVT
19. EDWTRDVS ⊕ POS^o/⊙VIDGV/TDIVT

Series D.

20. All arches fleured, thin α FRTUIC^o POS/ No stops. α for α
21. FRTUIC^o α for α /VIDGV^o/
22. ⊙7FRTUIC^o α for α POS/ No stops. α for α
23. TUIGLI FRTUIC^o " " " "

Mule D/E.

24. FRTUIC^o VIDGV^o/ Much clipped.
25. EDWTRDVS RDX TUIGLI7FRTUIC^o Square POS/VICDGV/ P = R
E in *Edwardus*. α for α in *Rex*. No stops.

Series E.

26. FRTUIC^o POS/ No stops. Normal R
27. FRTUIC^o POS α α broken below.

Mule E/F.

28. TUIGLI^o7⊙FRTUIC^o i. m. crown. POS/ No stops.

⁹ This coin has apparently an annulet enclosing a pellet before EDWTRD.

29.	FRTHO	Mule E/G.	No. of coins.
		+POS/ II II in London. Nothing in any quarter.	1
		Mule F/G, var. <i>a</i> .	
30.	THGLL7o	II II in London. Nothing in any quarter.	1
		Series G, var. <i>a</i> .	
31.	THGL7oFRTHO Annulet under bust, double-barred II in Franc.	POS/V1oDGV°T/DIVTO/RQM°M II II in London. Annulet under CIVI- ²	1
32.	FRTHO	POS/V1oDGV/°TDIVT Q for Q II II in London. Annulet under CIVI- ²	1
		Similar, with later reverse.	
33.	FRTHO	POS/V1oDGV Saltire stop. Q Q broken above. II II in London. Nothing in any quarter.	1

London Pennies.

Mule C/A.			No. of coins.
EDWTRDVSRXOYHGLI		QIVITTS LORROR An annulet in each quarter, round R's.	1
2. T	Two pellets over crown.	TTS? Two annulets after	1
3.		TTS Annulet above T	1
4.	Series C.	LONDON Square R	6
The weights are 15.9, 16.9, 17.4, 17.7, 18.4, 18.6 grs.			
5.	Series D.	LONDON Unbarred	1
6.	Thin R, no stops. YHGLI Square topped R	H's. H's.	1
7.	Series E.	LONDON N's?	1
8. i. m. crown.	YHGLI	LONDON	1

		Mule F/G, var. a.		No. of coins.
9. i. m. crown.	THGLI		LONDON Annulet under CIVI- ⁺	1
10. i. m. crown.	THGLI	Mule F/G, var. c.	LONDON Saltire under TTS - ⁺	1
Illegible.				2
		York Groats.		
		Mule E/D.		
1. Legend normal.	R of Series D	ÐhYB	POSVI/ÐEVW EBORTOI CIVITTS	1
			Series E.	
2.	R of Series D.	ÐhYB	POSVI/ÐEVWm°T/ Early R	
			Fault in ÐEVW	
3. GDOVTRD	Normal R	oD°hYB	POSVI°/ÐEVW°T Normal R	1
			Fault in ÐEVW Two coins	
			from same dies.	2
4.		oD°hYB	POSVI°/ Early R	1
5.		oDhYB	POSVI°/ Normal R	
		Large fault in die.		1

No. of
coins.

6. Same die.

POSVI°/DQVΩ CIIVITTS EBORTOI

1

α for θ in DQVΩ

7.

°DhYB

POSVI/DEVΩ

EBO RTOI

α α broken below.

CIIVITTS

1

York Half groats.

Series D.

1. CDWTRDVS°ROX°THIGLI FRTOI

POS/VI°DEV°/ EBORTOI CIIVITTS

α for θ, no 7

1

Mule E/D.

FRTOI

Legend indistinct.

2.

1

Series E.

THIGLI°7°FRTOI

POS/VI°DEV°/ CIIVITTS EBORTOI

Ten arches to tressure.

3.

1

4. Same die.

EBORTOI CIIVITTS

5.

THIGLI°7°FRTOI

POS/VI DEV /

CIIVITTS EBORTOI

No stops.

1

THIGLI°7°FRTOI°

POS/VI DEV°/

CIIVITTS EBORTOI

6.

1

7. Same die.	TUGL ^o 7 ^o FRKTH ^o TUGL ^o 7 ^o FRKTH ^o	Another die as last.	No. of coins.
8.		POS/VI ^o DEV ^o / CIVITTS EBORTTH	1
9.	Q and Q broken below.	POS/VI ^o DEV ^o / "	1
York Pennies. Royal mint. 1353-1355.			
Series D.			
1.	EDWTRDVS ^o RDX ^o TUGL ^o 7 ^o Q for Q in	CIVITTS EBORTTH No quatrefoil in centre.	1
2.	EDWTRDVS ^o RDX ^o TUGL ^o 7 ^o Q for Q in <i>Rev.</i> ^o misplaced.	Two coins from same dies, wts. 16.5, 18.2 grs.	2
Series E.			
3.	REX ^o TUGL ^o 7 ^o	QBO Q for Q QBO	1
4.	Early R both sides.	Archbishop's mint. 1356-1361. Quatrefoil in centre.	1
Series G, var. <i>a</i> .			
5.	¹⁰ Annulet under bust. Annulet stops.	Quatrefoil in centre.	1
¹⁰ L. A. L. has same <i>obr.</i> die united with a reverse G, var. <i>d</i> , with TT.S.			

6. Another die. Annulet under bust. Quatrefoil in centre much worn.

Series G.¹¹

7. GDWTRDVS•RXX•THIGLI•7 Annulet TTS without pellets?

8. Nothing under bust. under bust.

9. Bust variants.

10. THIGLI•

11. THIGLI•F Letters of Series G d.

12. Annulet stops where visible. TTS where visible.

13. GDWTRDVS•RXX•THIGLI TTS

14. THIGLI•F* TTS? GBO altered.

15. Another die, illegible. Same die.

16. THIGLI•F TTS Four reverse dies.

17. TTS

18. A late G coin, illegible, wt. 19.3 grs.

¹¹ The varieties are uncertain; nos. 13-18 are late.

Durham Pennies.

Series C.

ƆDWTƆRDVS•RAX•TIGLIƆ

1. ƆDWTƆRDVS•RAX•TIGLIƆ

2. TIGLIƆ

3. TIGLIƆ

4. Uncertain endings.

5. ƆTIGLIƆ

6. ƆDWTƆRDVS•RAX•TIGLI Trefoil of pellets on breast.

Series D.

7. TIGLIƆ Thin Ɔ,
annulet stops.

8. TIGLIƆ Thin Ɔ

9. " Broad Ɔ

10. ƆDWTƆRDVS•

11. ƆDWTƆRDVS No stops.

12. " ƆTIGLIƆ

No. of
coins

2

11

3

3

1

1

3

1

2

1

4

1

				No. of coins.
12a.		Mule D?/G.		
13. Illegible.	TNGLI7	R of Series D.	DVRΘMΘ	1
				6
		Series E.		
14. ΘDWTPEVS PEX THGLI	P = R	No stops.	DVN	1
15.		"	DVI	1
16.		"	DVI	1
17.		Annulet stops.	DVI	3
18.		"	Uncertain N	1
19. ΘDWTPEVS PEX THGLI	Normal R		CIVI altered.	1
20.	"	"	Normal.	1
21.	THGLI	"		2
				1
		Mule E/F.		
22.	THGLI		PCIVITTS DVRΘMΘ	1
23. A partly altered bust. ¹²	"		PCIVITTS DVRΘMΘ	1
	"			
		Mule E/G, var. α.		
24. Same bust.			PCIVITTS DVRΘMΘ	1
			Annulet under	
			CIVI	1
		Mule F/E.		
25. i. m. crown. ΘDWTPEVS PEX THGLI	PCIVITTS DVRΘMΘ			1

¹² Num. Chron., 1929, Pl. VI, no. 13.

Series F.		No. of coins.
26. Altered bust.	oTIIIGLI7 II? DVRΘIIΘ	1
Series G. ¹³		
27. Altered bust. Four different dies, one may have annulet before 7; one has annulet on breast.	ƆCIVITTS DVRΘIIΘ	
28. Normal bust.	oTIIIGLI7 o under bust.	4
29.	oTIIIGLI7	1
30.	" "	1
31.	oTIIIGLI7	1
32.	TIIIGLI7 (where visible). Θ broken below.	1
33.	TIIIGLI7	12
34. Annulet stops where visible.	ƆCIVITTS DVRΘIIΘ Pellet before DVR TTS where visible; illegible.	3 8

¹³ Since this paper was put into type I have further classified the Durham pennies; they should be grouped as follows:—Ga, nos. 27-31; Ge, 43, 47; Gd, 32; Gd/Gc, 40; G (d, e or f?), 33-39, 41; Gf, 42; Gg/Gf, 44-46; Gg, 48; Gg/Gh, 50; Gh, 49.

No. of
coins.

1

8

1

3

6

2

3

18

ƆIVITR R for S
TTS

WGLI*7 An annulet on
each shoulder.

" "

WGLI*7 Annulet stops.

Stops?

WGLI*7 Annulet stops.

WGLI (7 omitted).

Annulet stops.

EDWTRDVS*WGLI*7 ∴ on breast.

ƆIVIT·T·S DVRMΘ A pellet each
side of T in TTS

The wts. of coins of no. 42 are 15.8, 16.0, 16.5, 16.7, 17.0, 17.3, 17.5, 17.8, 17.9, 18.0 (2),
18.1, 18.2, 18.3, 18.5, 18.7 (2), 20.0 grs.

43. WGLI*7 * stops. Q Θ Q and Θ broken above.
broken above.

43a. Illegible.

44. WGLI*7 * stops.

45. WGLI* "

2

1

5

1

" "

T·T·S (two from the same dies)

TTS

	T.T.S	No. of coins.
64. EDWTRDVS:RXX*TNIGLI*7	Two stops before RXX	1
47.	"	1
48. Illegible.	* in quarter below TTS	2
49. Open E, saltire stops.	Normal legend, late E	1
50. Late E, saltire stops.	" "	1
51. Illegible of Series C, D, E, and G	[DVR]ELMM E Open E	7

SCOTTISH COINS.

Alexander III. Sterling. Bust l. TLEX*TNDR	REX SCOTORVM	Four mullets of six points.	2
	DEI GRAT	Three mullets of six points; one star, seven points.	1
David II. Edinburgh half-groat. VILLIT*EDMBVRGH	Wt. 35.5 grs. (Burns, Pl. XX, 263-265)		1
Sterlings:	DTVID·DEI·GRATIT	REX SCOTORVM	2
	DEIGRATIT		1
	:DEI.		2
	DTVID DEI:		1

FOREIGN STERLINGS.

No. of
coins.

Gaucher II de Châtillon, 1303-1329, Count of Porcien, struck at Yves. Chautard, nos. 241,
242. 3

Valeran II, 1316-1354, Count of Ligny, struck at Serain. Chautard, var. no. 226. 1

John the Blind, 1309-1346, King of Bohemia, struck at Luxemburg. Chautard, no. 170. 1

John III, 1312-1355, Duke of Brabant, struck at Brussels. Chautard, no. 112. 2

William of Hainault, Bishop of Cambrai, 1292-1296, struck at Cambrai. Chautard, no. 209. 1

L. A. LAWRENCE.

MISCELLANEA.

A LATE ROMAN HOARD FROM CORINTH.

WE have recently had the opportunity at the British Museum, through the kind offices of Messrs. Baldwin & Son, and Dr. L. A. Lawrence, to examine the following hoard of Roman bronze. Apart from the fact that it was found at Corinth, no particulars are available. The hoard contained the following coins:

Greek. 3.

ATHENS (3rd century B.C.). 1. B.M.C. nos. 221-5.

CORINTH (3rd century B.C.). 1. B.M.C. nos. 423-33.

PHILIP II OF MACEDON (c. 340 B.C.). 1.

Obv.—Bust of Heracles r.

Rev.—ΦΙΛΙΠΠΟΥ Club. Æ 4.

Roman.

CLAUDIUS II. 1. C. 50 (imitation of small size and in late style).

TETRICUS I. 2. C. 70 (imitations of small size and late style).

CONSTANTIUS II. 6. C. 45 (2), 95, 188, 335 (2—mint-mark SMANΔ—1).

PERIOD OF CONSTANTIUS II. 6. As C. 45 (*rev.* FEL·TEMP·REPARATIO. Soldiers spearing fallen horseman—3), as C. 95 (*rev.* GLORIA EXERCITVS—2—one an imitation in curious style), as C. 188 (*rev.* SPES REIPVBLICE).

CONSTANS. 4. C. 54 (mint-mark $\frac{1}{\text{SMKS}}$ —?), 176 (2), 197.

JULIAN II. 3. C. 41 (2), 145 (?).

VALENS. 3. C. 11, 47 (2).

PERIOD OF VALENS. 7. As C. 11 (*rev.* GLORIA ROMANORVM), as C. 47 (*rev.* SECVRITAS REIPVBLICAE — 6).

VALENTINIAN II. 9. C. 12 (2), 30 (6), 46 (mint-mark $\frac{|}{\text{ASIS}}$).

THEODOSIUS I. 27. C. 16 (2), 30 (16 — mint-marks $\frac{|}{\text{ALEA}}$ — 1, $\frac{|}{\text{CONSA}}$ — 2, $\frac{|}{\text{SMKB}}$ — 6, $\frac{|}{\text{TESA}}$ — 1), 41 (2 — one with mint-mark $\frac{|}{\text{FSIS}}$), 68 (7 — mint-marks $\frac{|}{\text{SMKB}}$ — 2, $\frac{|}{\text{SMK}\Gamma}$ — 2).

AELIA FLACCILLA. 1. C. 5.

ARCADIUS. 17. Sabatier 38 (4), 41 (11 — mint-marks, $\frac{|}{\text{SMHA}}$ — 1, $\frac{|}{\text{TES}\Gamma}$ — 1) 47, 48.

HONORIUS. 4. C. 24, 39, 56, and one of uncertain reverse.

PERIOD OF HONORIUS. 2. As C. 39 (*rev.* VICTORIA AVGGG. — 2).

JOHN. 1. C. 1.

THEODOSIUS II. 37. Sabatier 26, 27 (11), 33 (16 — mint-marks $\frac{|}{\text{CON}}$ — 2, $\frac{|}{\text{SMKB}}$ — 5), 34 (6 — mint-mark $\frac{|}{\text{CON}}$ — 1: three are imitations) and three coins of a type not in Sabatier. (*Obv.* D·N·THEODOSIVS P·F·AVG·, diademed, draped, r. *Rev.* CONCORDIA AVGGG. Victory standing front, holding wreath in each hand. Probably all of this reign, though only one has a clear obverse reading: one has mint-mark $\frac{|}{\text{CONOB}}$.)

VALENTINIAN III. 11. C. 15 (3 — mint-mark $\frac{|}{RM}$ — 1),
36 (8 — mint-mark $\frac{|}{RM}$ — 1: two of these are imitations).

MAJORIAN. 1. C. 4.

MARCIANUS. 85. Sabatier 11 (85 — mint-marks $\frac{|}{CON}$
— 11, $\frac{|}{THES}$ — 6, $\frac{|}{NIC}$ or $\frac{|}{NICO}$ — 7, $\frac{|}{CVZ}$ — ? — 1).

LEO I. 136.¹ Sabatier 14 (32 — mint-marks $\frac{|}{CON}$ — 2,
 $\frac{|}{CN}$, 2), 15 (13), 17 (42 — mint-mark $\frac{|}{CON}$ — 3), 19
(28 — mint-mark $\frac{|}{NICO}$ — 1), 20 (21 — mint-mark
 $\frac{|}{CON}$ — 1).

JUSTINIAN I. 1. B.M.C. ii. *Byzantine*, p. 46, no. 153.

Uncertain. 4th to 5th century.

Obv. Bust, diademed, draped, r. *Rev.* SALVS REIPVBLICAE, Victory advancing l., holding palm and dragging captive. 50 (including a number of barbarous imitations).

Rev. 5th century. 'VOTA' types in wreaths. 5.

Rev. Cross in wreath. 29.

Rev. ✱ in wreath. 1.



1.



1.

Obv. Standing figure. *Rev.* Cross. 4.

¹ Sabatier gives *obv.* D · N · LEO or D · N · LEO MVL. On most of our coins the legend was lost, but the forms D · N · LEO, D · N · LEO P · F · AVG ·, and D · N · LEO PERPET · AVG all occurred.

Quite uncertain. 23.

The coins were distributed as follows:

GREEK. 4th-3rd century 3

ROMAN.

Claudius II (imitation)	1
Tetricus I (imitation)	2
Constantius II	6
Period of Constantius II	6
Constans	4
Julian II	3
Valens	3
Period of Valens	7
Valentinian II	9
Theodosius I	27
Aelia Flaccilla	1
Arcadius	17
Honorius	4
Period of Honorius	2
John	1
Theodosius II	37
Valentinian III	11
Majorian	1
Marcianus	85
Leo I	136
Justinian I	1

Uncertain.

4th-5th century	55	
5th century	36	
Quite doubtful	23	
	—	114
		—
		478
		—

The latest dateable coins of the hoard are of the Emperor Leo, and as they are present in mass, they suggest a date not too early in his reign (A.D. 457-74), say c. A.D. 465-70. The condition of the coins was poor and few mint-marks could be read: of those few almost all were Eastern. The hoard has several interesting features: (1) the presence of three Greek coins (4th-3rd century B.C.)—if, indeed, they

should really be included in the hoard; (2) the presence of three imitations of radiate heads in style and module suggesting a late date: it seems clear that in the East, at any rate, radiate coins were known and imitated long after their first issue; (3) the presence of a new reverse type of Theodosius II and of numbers of late imitations of 4th to 5th century coins, some of them of curious and hitherto unknown types.

H. M.

THE COINS FOUND AT THE CAMBORNE ROMAN VILLA.

DURING excavation (in September, 1931) of a Roman Villa at Magor Farm, Camborne, Cornwall, the following coins were found:

HOARD OF DENARII.

Faustina I . . .	Cohen, <i>Med. Imp.</i> 150 (worn)
Lucius Verus . . .	C. 155
Septimius Severus . . .	C. 694 (worn)
Julia Domna . . .	C. 27 (worn), 174
Caracalla	C. 484
Elagabalus	C. 62, 208
Severus Alexander . . .	C. 1, 251, 315 (2)
Julia Mamaea	C. 81

OTHER COINS.

Gallienus	C. 1008 (<u> € </u>)
Claudius II	C. 21, 265, 301
Quintillus	C. 39 (<u> X </u>)
Postumus	C. 206
Victorinus	C. 50 (<u> * </u>), 131
Tetricus I	C. 37.

All the coins are in an excellent state of preservation, the majority being completely legible. Several of the antoniniani are remarkable for their large module and that of Postumus in addition retains the original silver wash in its entirety.

The denarii were found in a specially fitted wall recess or cupboard in an inner room, with the exception of one (Elagabalus) which was picked off the floor of the corridor leading from the room. These coins in all probability constitute only the remains of the household treasure, which was pillaged in ancient times.

The antoniniani are regarded as having been used by a later occupant of a portion of the villa whether as squatter or bailiff of the owner.

The mint-mark of the coin of Gallienus (| €) is, not recorded in Mattingly and Sydenham, but a specimen with precisely the same characteristics has been noted by the present writer among coins from Caerwent now in Newport (Mon.) Museum. The coin otherwise conforms to the type of M. and S., v, p. 156, no. 287, from the mint of Rome.

B. H. ST. J. O'NEIL.

REVIEWS.

Untersuchungen zur römischen Reichsprägung des zweiten Jahrhunderts. VON PAUL L. STRACK. Teil I. "Die Reichsprägung zur Zeit des Trajan." Pp. xi+308. Pl. X. W. Kohlhammer, Stuttgart, 1931. 40 m.

THE appearance of this first part of Dr. Strack's researches on the Roman coinage of the second century A.D. should attract the attention of all historians who care for coins and all numismatists who care for history. Older students will be happily reminded of the fine numismatic work of Professor Max Strack, the father of the author, and will welcome with delight the hope and promise in the work of his son.

Dr. Strack's work is based on a new collection of the numismatic material, undertaken by himself in some thirty public and private collections. He is able, therefore, to depend primarily on autopsy and only in a secondary degree on previous publication. It is no more than bare justice to him to admit that he has succeeded in producing the best Roman catalogue that we have yet seen, from the point of view of the authenticity and the comparative rarity of coins. His descriptions are extremely condensed, but give the minimum required and are helped out by the plates and by further elaboration in the main text. Various classes of coin are assigned with good reason to an Appendix—hybrid and barbarous pieces and pieces recorded but not available for testing by the author. Good use is made for reference both of Cohen and of Mattingly and Sydenham, but the author maintains his own independence throughout.

The main body of the work consists of a discussion, usually full and sometimes extremely elaborate, of all the main numismatic and historical questions suggested by the coins. Over a large part of the field the author breaks new ground, advancing from the bare general understanding of a type towards its precise inward meaning. There is ample evidence of steadiness and balance of judgement, as well as of freshness and originality of conception. Some of the suggestions put forward are brilliant—and, what is better still—may be true. Dr. Strack's book will be indispensable in future to all students of his period. It may be that

occasionally the author is tempted to think that questions raised by him have escaped the notice of previous workers. It will be enough to remind him of Sappho's lines on the apple left on the tree—"the gatherers forgot it—no, did not quite forget it, but could not reach it!"

At the outset, Dr. Strack defines his attitude to a number of general problems. He observes most happily that Roman coins show us something like a shorthand version of the "acta urbis" (pp. 4, 5), and shows why, despite their official character, they have such marked historical value. His suggestion that the main cause for the debasement of the denarius was a rise in the price of silver is not supported by any strong argument (p. 12). As for medallions, Dr. Strack argues strongly—perhaps justly—for their inclusion in a book on coins: but he certainly minimizes the very real difference between the ordinary bronze medallion and the coin (pp. 9, 10). Dr. Strack's attempt to prove that coinage was not divided between Emperor and senate, with gold and silver for the one and *aes* for the other, seems to us unsuccessful. Of course there are well-attested exceptions: the rule remains sufficiently clear to be worth stating in general terms. Dr. Strack increases the imperial issues of *aes* to a considerable bulk by including in them the class of legend, S·P·Q·R·OB CIVES SERVATOS, &c.; but are these more than a mild variant of the ordinary S·C., the senate striking for the nonce not as itself alone, but as representative of the Roman people?

Mint questions in Trajan's reign hardly arise, but chronological questions are sufficiently difficult. Dr. Strack meets these difficulties with great skill and success. One ingenious suggestion about the first year, which involves placing a series without P·P· in between two series with it, is ably pleaded: but the weights of the aurei are, I believe, decisive against it. Trajan began with the heavy aureus of Domitian and Nerva, and dropped, almost immediately, to the standard of Nero. Another suggestion, based mainly on portraits, concerns the great issues of the fifth consulship. Dr. Strack wishes to place the group with rev. legend S·P·Q·R·OPTIMO PRINCIPI before that with COS·V·P·P·S·P·Q·R·OPTIMO PRINC. His results deserve the most careful checking and may prove to be correct: but he seems to us to underrate the evidence of coins dated COS·V DES·VI, and to assume too readily that there is a single consistent development of portraiture in the mint. Where several officinae work side by side, curious

interminglings of "early" and "late" portraits may easily occur. The general chronology of the years 112 to 117 is sure. In the closer detail, where uncertainty begins, we are not quite sure whether we can follow Dr. Strack. He seems to date the legend "Parthicus" too early.

Turning to the special study of Trajan, we find a variety of good things to choose from. There are some excellent remarks on the transition from Nerva to Trajan, on the general meaning of personifications, particularly of those related to the Emperor either by genitive case ("Augusti") or by adjective, and on the special interpretation of "Pax Augusti". There are some valuable suggestions about the shields voted by the senate to the Emperor and an excellent interpretation of a difficult type of the early years as "Annona Secura". Historians will have to consider seriously the new suggestion, that the whole "plebs", not merely the recipients of corn-dole, were admitted to share in the bounties. The identification of the Hercules of Gades and the consequences drawn from it are alike interesting and convincing. The proof that *congiarium* = *liberalitas* is well made out, and there are very illuminating comments on such types as Spes, Salus, and Felicitas. The distinction between the Dacia types of Trajan and Hadrian is well observed and explained in a most interesting manner. But we may leave the reader to discover for himself the treasures that await him. Suffice it to say that there are very few questions which are not helped forward towards final solution by the author, very few pages where the interest is not fresh and the treatment vital.

Dr. Strack would be the first to agree with us that our study of Roman coins is still, in many respects, in its infancy, and that complete agreement on many subjects is not yet to be expected or even desired. Just a few points of criticism may be added. On p. 20 we hear that Trajan as Caesar had no right to coin: it is not safe to say more than that he struck no coins. On pp. 45-7, the conceptions of "Providentia Augusti" and "Providentia Senatus" are allowed to run over into one another. The "Provident. August." of Titus shows on reverse Vespasian radiate, not the Genius of the Senate, facing Titus. Is the curious *Τύχη πάντων*, quoted on p. 79, perhaps Isis? Is the connexion between Minerva and Hercules of Gades rightly made out (p. 137), and is there sufficient evidence for games of Hercules in Rome in 107? On p. 156 Dr. Strack maintains that "moneta" means "mint", and no more, and that there

is no minor goddess, "Moneta". We are not convinced by his arguments—we still regard Aequitas and Moneta as distinct, though closely allied, beings like Pax and Felicitas. On p. 171 is not the meaning of SALVS AVGVSTI too closely restricted to physical health, and does not the late "Salus" type of Trajan point to his escape from the earthquake of Antioch? The object held by Arabia in her left hand is hard to determine, but surely not a quiver (p. 195). To suppose that Trajan's father died in 112 would account well for his consecration issue (p. 200), but is it really possible in view of the language of Pliny? The striking of a "Providentia" type in Trajan's latest years is, of course, no decisive proof that the Emperor was concerned with the succession: but that is probably the most natural meaning of the type. And, if he was, what candidate but Hadrian?

Here we must close our review, remembering that other volumes are to follow and that we must certainly not miss them when they come. It is very much to be hoped that the fact that the book is in a foreign language will not prevent it from making its way in England. To all lovers of Roman coins it is a sign of great joy and promise.

H. M.

Das Ptolemäergeld: eine Entwicklungs-geschichte des ägyptischen Münzwesens unter Berücksichtigung der Verhältnisse von Kyrene. Mit 4 Lichtdrucktafeln. Pp. iv + 98. 1980. B. G. Teubner, Leipzig and Berlin. 12 m.

After his handsome books on Sicily and Italy Dr. Giesecke now turns his attention to a coinage of the Eastern world, which, if less popular than many in the estimation of collectors, is second to none in importance and interest—a coinage, too, which offers ample scope to Dr. Giesecke's great talent for metrological study. In presenting the coinage of the Ptolemies Dr. Giesecke has followed his usual method. He describes in turn the successive issues, briefly indicates their bearing on history, and then investigates more fully their metrological meaning. Many of the problems which he has to face are of formidable difficulty and cannot be understood without a modicum of effort. But Dr. Giesecke here, as always, writes in a clear and agreeable style, which makes things as easy for his reader as they can be made. A new short study of the Ptolemaic coinage has long been wanted, and it is much to be hoped that English readers will appreciate and welcome it.

It would not be fair to take leave of a book of serious scholarship without expressing some opinion of its success on the more controversial side. When Dr. Giesecke touches history, he seems to us to select with good judgement the important points of contact. Just one point may be quoted where he appears to us less successful. On p. 25 he rightly comments on the connexion between the so-called Romano-Campanian "Roma"—Victory didrachm and the Arsinoe decadrachms of Egypt, as shown in the mint-marks Λ to Ω , and $\Lambda\Lambda$ to $\Omega\Omega$. But can the Arsinoe series, with over fifty reverse dies, be as limited in extent as he suggests? And is it conceivable that Egypt copied from Rome a novel system of *Greek* numeration on coins—a system known to have been used by Alexandrine scholars of the period? We do not think that Dr. Giesecke has realized the implications of this fact for chronology.

The most important part of Dr. Giesecke's work is, however, metrological, and on this he would no doubt choose himself to be judged. As always, he regards all the copper coinage as value, not token, money. He takes the ratio of silver to copper as normal at 96 to 1. On these two assumptions he grapples valiantly with the difficulties of silver and copper relations in Egypt in the second and first century B.C. His solution—a very ingenious one—consists in identifying the heaviest copper coin at two different weights, 90.95 gm. (1403 gr.) or 72.76 gm. (1122 gr.), with the silver obol expressed in copper. This coin then is one twenty-fourth of the silver tetradrachm in value and its two weights correspond to a higher (or lower) value of silver—120:1, 96:1. As papyri show that the silver drachm equalled from 500 to 375 copper drachmae, this copper obol equals about 83 to 63 copper drachmae.

If we accept Dr. Giesecke's premises, we shall find his solution attractive and, perhaps, even convincing. But those of us who have questioned them before will probably continue to question them still. We are not convinced either that Egyptian copper represents full value or that 96:1 (or 120:1) represents the normal relation of silver to copper. There is a formidable weight of evidence for a much higher relation. Papyri, we have seen, value the silver drachm at 500-375 copper drachmae. The simplest reading of this is that silver was worth 500-375 times the same weight of copper. It is very difficult to make "drachm" mean one thing for silver, another for copper, in one and the same equation. In Sicily in the fifth century B.C. a

small silver coin (0.86 gm., 13.3 gr.) represents the *litra*, the pound of copper. Unless this *litra* was much smaller than any normal pound of the West, a relation of silver to copper much higher than 120 to 1 is involved. The coinage of Lipara, where a struck half-litra of c. 49.2 gm., 750 gr., appears, proves nothing, until we are certain whether the *litra* is a reduced one or not. In Italy the case is stronger. The *As* of Hæberlin's light Latin series is definitely linked to a didrachm—a "denarius" or δεκάλιτρος στατήρ, containing 10 libellae or "little pounds" of silver each equivalent to a "litra" "pound" of copper. If the libral *As* is, as it obviously ought to be, the "litra" in question, the relation of silver to copper is somewhere near 400 to 1. In the fourth century A.D. gold was to copper as 1800 to 1. In the third century B.C., with silver at 120 to 1, gold, ten times as valuable as silver, would stand at 1200 to 1. A progressive decrease in the value of the precious metals during long centuries of wealth is what we ought to expect, not a continuance on the original level, let alone an increase above it.

But, interesting as these knotty problems are, they must not detain us further. We thank Dr. Giesecke for his attractive book, with its beautiful presentation and its resolute scholarship, and trust it may find many readers.

H. M.

The Coins of the Dutch East Indies. By SIR JOHN BUCKNILL. Pp. xiii + 291; 226 illustrations in the text. London: Spink & Son, Ltd. 1931. 10s.

THE late Sir John Bucknill was a man of varied interests. In the course of a distinguished legal career in the Colonial service he held office in South Africa, Cyprus, Hong Kong, Singapore, and India, and in each of these places he took up with great distinction some work quite outside of his professional work. In South Africa he was editor of the *Ornithologists' Journal*, in Cyprus he wrote his *Ornithology of Cyprus*, in Singapore he was Chairman of the Raffles Museum, and on his transfer to Patna he did a great deal for the Museum there and became President of the Numismatic Society of India. It was in Singapore that he became interested in the coins of the Dutch East Indies and took up the subject with characteristic thoroughness. It is a subject on which nothing has been written in English, although one of the finest collections was made by an Englishman, the late Mr. H. T. Grogan, whose sale-

catalogue is still a valuable work of reference. The subject has of course been fully treated in Dutch, notably by Mr. J. P. Moquette in his series of articles in the somewhat inaccessible *Batavia Tijdschrift*, 1907-10. Sir John Bucknill's work is a complete history of the coins of the Dutch Archipelago from the sixteenth to the twentieth century, struck for Java and their other possessions. The catalogue of the coins is a singularly complete one; the particulars given of their issue represent a vast amount of research in mint records. The author was singularly accurate in his work and was never content to accept any statement without verification. A feature of the work of special interest to English collectors is the very full history of the English coinage for Java 1811-16. The book is very fully illustrated and the documentation is singularly complete. Reference to a collection and publication is given for almost every coin, and the notes on prices fetched in sales will be found of interest.

J. A.

The Quarterly of the Department of Antiquities in Palestine, Vol. I, nos. 1 and 2. Oxford, Humphrey Milford: 1931. 5s. each part or 18s. 6d. per annum post free.

THIS is a new periodical which the Department of Antiquities in Palestine intends to publish quarterly. It will record archaeological discoveries made by the Department, describe unpublished antiquities in the Department's collections, and encourage an interest in Palestinian archaeology generally. Coins have their fair share of space in the first two parts. The most important numismatic article is a description of a hoard of fourth-century (B.C.) coins of Tyre from Tall Abu Hawwan near Haifa, which is fully discussed and well illustrated. A hoard of Byzantine bronze coins of the sixth century A.D. from Mount Carmel comes next in interest; it should have been noted that the illustrations here are reduced in size. A Fatimid die from Amman raises interesting problems, and the writer concludes it was the work of a private forger. A full list is given of Roman and Byzantine coins from excavations at Karm al-Shaikh, covering mainly the third to the sixth centuries. A useful article gives unpublished coins of Judaea in the Palestine Museum. Here we can only deal with the numismatic articles, but we should like to call attention to the space given to Muhammadan archaeology, in particular to the translation of medieval texts of archaeological interest which is to be a feature of this new periodical.

J. A.

Die Münzen von Syrakus. By ERICH BOEHRINGER. Text, pp. vi+297. Portfolio 32 collotype plates. Walter de Gruyter & Co., Berlin. 1929.

DR. BOEHRINGER has produced a most valuable book alike for the student and for the collector. His title is a little misleading, for he is only concerned with Syracusan coins from the beginning down to the period where Tudeer had already taken up the story in his *Tetradrachmenprägung von Syrakus . . . der signierenden Künstler*. But within this space he has collected all the die varieties extant in the principal collections of the world, public and private, and by the help of die couplings and stylistic development, has arranged them chronologically in groups and subdivisions. A coin from every die is illustrated, and (an improvement on most previous die monographs) not only is a distinguishing number given to each die, obverse and reverse, but also to each coin resulting from any given combination of dies. Finally in the text the author records under the number of every such coin all the examples (wherever possible with weights) which he has come across. The collector will thus be able to find out whether his coin is from dies already known and may possibly discover its pedigree if he does not know it already. He will be a lucky man indeed if he can write "Boehringer—" on his ticket. The student on the other hand will find the work indispensable if only for the mass of material which it has collected. Dr. Boehringer is primarily an archaeologist, and numismatists will be grateful for the wider outlook which he thus possesses, and his frequent reference to the products of the other arts for chronology and interpretation. One or two points suggest themselves for comment: his early date, 530, for the beginning of the coinage is to be welcomed. "Before 485", the date given in the *Historia Numorum* is so vague as to be misleading. Indeed, we should not have quarrelled with him if he had pushed it even farther back. He apparently regards the unique Berlin tetradrachm with plain incuse reverse which opens the series, as genuine, though it has been condemned in one of Dr. Gaebler's recent holocausts. It is perhaps worth noting that his obverse dies v. 3, v. 4, in the earliest group are really the same, as is shown *inter alia* by the flaws on the letters, and that this die was heavily reworked and altered. A very interesting discovery is that of the use of an uninscribed obverse die of Leontini with a reverse die of Syracuse, the importance of which for dating is well brought out. At the same time it is difficult to

believe that so much of this vast early coinage (and how vast it is one had not fully realized before the publication of this book) was crowded into the years 485-479, and that a gap of some years followed the Demareteion issue during which no coinage was struck. Surely it is precisely after the battle of Himera when enormous quantities of booty fell into the hands of the victors that we might expect a large and hasty output of coinage. The Demareteion group stands apart artistically, and therefore need not be the terminus of the "pre-pistrix" coins. Conversely we would rather place the earliest coins of Boehringer's third group before than after 485. We are sorry that the author does not accept Holm's view that the lion symbol on the Demareteion and the contemporary coins of Leontini symbolizes Carthage in defeat. The lion is clearly used as a symbol of Carthage on later coins, and though there is a certain difficulty in the interpretation here the difficulty of his alternative explanation is no less. The traditional connexion, however, is maintained between the sea battle of Cumae (474 B.C.) and the issue with the sea-monster symbol, —pistrix (ketos), to which a special section is dedicated.

About the middle of the fifth century the pistrix disappears, and the head of the goddess is first covered with the saccus; the series on which the saccus is wreathed will then commemorate the victory over the Sicel king Ducetius. The little group with the grasshopper symbol closes the long list and leads on into the period of signed coins which Boehringer regards as beginning c. 435. Besides that on the pistrix special sections are devoted to such subjects as technique, ancient forgeries, mint organization, and notably to the identity of the goddess whose head provides the constant type, and whom the author adduces strong reasons for regarding as Artemis herself. The suggestion made in an addendum, to explain the very varied forms in which the head of the goddess is shown, that she is represented under the guise of her living priestess of the day, hardly seems a happy one.

Format and plates are admirable.

E. S. G. R.

Roman Britain, 1914-1928. By Sir GEORGE MACDONALD.
Pp. 114. 16 plates, 23 illustrations in text. London,
published for the British Academy by Humphrey
Milford. 1931. 7s. 6d.

For those who cannot follow for themselves the infinite detail of modern archaeological research, a guide is an absolute

necessity ; but a guide of the proved capacity and expertness of Sir George Macdonald is a godsend too. In this concise sketch he gives us a vivid idea of the main achievements of excavations in Britain since the publication of Haverfield's *Roman Britain in 1914*, and helps us to see just where old problems have been brought nearer solution and where new ones have been brought forward. Most numismatists have enough of the antiquary in them to take a general interest in the past of our island, and there already is a sufficient reason for reading this book. There is yet another reason for any who care to go on to find it—namely, that numismatists have a very great deal to learn from archaeology—and also a little to teach it.

H. M.

Preliminary Report upon the Excavations at Tel Umar, Iraq, conducted by the University of Michigan. University of Michigan Press. Pp. 62, 13 plates. 1931. \$1.50.

This is a preliminary account by the Director, Mr. Leroy Waterman, and his assistants of the work done on a Parthian site in the Irak in 1927-30. Messrs. Manasseh and Yeivin deal with the architectural results. Mr. R. H. McDowell has an interesting chapter on the *bullae* of clay and bitumen from the site. Most of them relate to the salt-tax (*ἀλική*). Some, however, relate to the *ἀνδραποδική* which on the analogy of *ἀλική* Mr. McDowell suggests is a "slave tax". The important feature of some of these pieces is that they bear portraits which "closely resemble those found on the royal Seleucid coinage". They, however, are actually Seleucid portraits. Pl. V. 19 is Antiochus II, and the upper portrait on Pl. V. 21 is Antiochus III. Pl. V. 20 is very like one of the rulers of Persis illustrated on Pl. XXX of Mr. Hill's *British Museum Catalogue*. These identifications are quite in keeping with Mr. McDowell's reading of the dates. Mr. McDowell also catalogues the coins found ; these cover the whole Seleucid period, and the Parthian from Orodes I to Volagases V with some coins of Seleucia ad Tigrim. In conclusion we may mention the remarkable series of terracotta figurines shown on plates VI-X.

J. A.

Syracusan Dekadrachms of the Euainetos type. By ALBERT GALLATIN, Harvard University Press. London: Humphrey Milford. 1930. Pp. 53, 12 collotype plates. £3 15s.

Mr. Gallatin has searched public and private collections everywhere for decadrachms by or in the manner of Euainetos, and it is not likely that many specimens, or any varieties, have escaped his net. This sumptuous volume embodies the results of his labours. Each die is recorded and numbered with its different combinations; it is to be noted that the author describes the head as being on the obverse and the chariot on the reverse. Certainly in most, and possibly in all, cases their positions are technically speaking reversed, the head being on the concave side, and it would be interesting to know whether this disposition does in fact hold for all the decadrachm issues. It is not an academic question, for the decadrachms all just in the period when heads on coins were shifting from reverse to obverse, and a definite answer might help us with their chronology. Two interesting varieties which do not seem to have been noted before are the decadrachm on which the ethnic inscription has been entirely omitted (G. I) and that one which is described as having a second griffin's head behind the neck in addition to the one beneath the chin (H. I). Is this second symbol quite certain? to judge by the illustration it might almost be a break in the die phantastically shaped into the semblance of a griffin's head; it is certainly involved in a series of flaws. In this connexion the author describes and illustrates a Graeco-Italian cup of later date which reproduces one of these medallions and on which he believes there is an (uncertain) symbol behind the head which does not appear on any known specimen. The figure on the cup, however, is three removes from the original, being pressed in a mould which was made from a coin which was struck from a die; and to judge from a similar cup in the British Museum in which the medallion actually comes from the same mould, the symbol is none other than the common shell diversified by flaws on the coin or in the mould. Another cup in the Museum has a medallion without symbol which resembles more than any other the dies with star symbol and that one which is conventionally described, after Evans, as being by the "New Artist". Alterations of die are not so common as might have been expected; but it is interesting to see that

one of the signed dies (C. XVI) was used, with the addition of Δ , in a later series (incidentally this might have been mentioned in the text as well as in the introduction), and that when the shell symbol behind the head on another (G. I) was obliterated by a flaw, it was replaced by a griffin's head symbol beneath the chin. It is a pity that a coin which the author (and with reason) recognizes as doubtful (C. Y.) should have been admitted to the plates, and we should also suspect the authenticity of V and VI (R. XIII) which he has passed, obviously after some hesitation. Some useful if unambitious observations on chronological and kindred points serve to introduce a work which should be on the shelves of every numismatist who can afford to purchase it. The plates are excellent, though their magnification will appeal more to the art lover than the numismatist.

E. S. G. R.

Museum der Altertümer zu Istanbul: *Der griechische Goldschatz von Prinkipo*. By KURT REGLING. 1931. Weidmannsche Buchhandlung. Berlin.

The find described by Dr. Regling in this pamphlet is so remarkable that it is worth bringing to the special attention of readers of the *Numismatic Chronicle*. Though not perhaps of the same historical importance as the two finds of archaic coins from the Delta which the same author has recently published (*Z. f. N.* 1927), for sheer richness and variety it must be unequalled. The hoard which was unearthed in a little island off Constantinople was buried shortly before the advent of Alexander the Great, and Regling plausibly suggests that its owner was a merchant engaged in the Pontic trade. It contains 160 electrum staters of Cyzicus, comprising 60 different types, 7 of them unpublished, 4 gold staters of Lampsacus with 3 types, of which one is unpublished, 16 gold staters of Panticapaeum of all varieties except the latest, including the facing head and the bare head without wreath, and 27 gold staters of Philip of Macedon, these last most important for the dating of the hoard. The new Cyzicene types are Zeus head, Artemis head with bow and quiver, turreted head of Cybele, a further bald and bearded portrait head, a knuckle-bone player, and two animal groups—a lion bringing down a bull and a lion bringing down a stag. The knuckle-bone player is perhaps

the most interesting—among the many references to a similar pose in terra-cottas and vases the two rare coin-types with the same subject might have been mentioned, the nymph Arne at Cierium, and the girlish figure at Tarsus. The new Lampsacene stater is a female head in a wreathed saccus, for which the author does not venture a name but which gives the impression of an Aphrodite. Dr. Regling has not only described the find, but has seized the opportunity to analyse and discuss previous finds of Cyzicenes, Lampsacenes and staters of Panticapaeum, and to add, for the latter, a detailed examination of the varieties of type and their sequence. Altogether a most important and admirable publication.

E. S. G. R.

Numismatic Notes and Monographs. No. 47. *The Coinage of Metapontum* (Part II). By SIDNEY P. NOE. American Numismatic Society. New York. 1931. Pp. 133. 21 Plates.

Mr. Noe here gives another instalment of his valuable and careful study of the coins of Metapontum, covering the period from the beginning of the coinage in relief on both sides down to the series for which an Evaenetus-like head in several variations provides the obverse type, and which he dates shortly before the middle of the fourth century. Yet another volume will contain the later female heads, the Leucippus types, and, we hope, the bronze coinage. The coins are arranged in groups in rough chronological order, all the aid possible being derived from the study of die-couplings. The greater part of the book is necessarily taken up with a list of the coins, each die being described separately and illustrated, and all specimens which the author has come across being recorded where possible with weights and pedigrees. The list, which will be of great service to the collector, is preceded by a running commentary on the coins as they appear on the plates, which is made both lively and interesting by the author's enthusiasm for his subject and his appreciation of its aesthetic side. Special points are the fine new die with 'Ἀχέλοιο ἀεθλον, the sections on altered dies and plated coins, and the discussion of the work of the engraver Aristoxenus. Here the coin bearing this artist's signature along the corn-leaf of the reverse is published for the first time; on

another obverse his signature on the truncation of the neck is shown to have been added to a re-engraved die; while a series of ingenious arguments leads to the somewhat fragile conclusion that the beautiful type of Apollo playing the lyre, to which its reverse die couples a severe and much earlier looking head of Heracles, is also the work of the same engraver. This last is as may be, but enough has been said to show how much profit the collector and the more serious student of numismatics alike can draw from this excellent monograph.

E. S. G. R.

Sylloge Nummorum Graecorum. Vol. 1, Part I. The Collection of Captain E. G. Spencer-Churchill and the Salting Collection in the Victoria and Albert Museum: published for the British Academy by Humphrey Milford and Spink & Son. London, 1931. Folio. 8 pp. 8 Plates. 7s. 6d.

The object of this publication is to make accessible Greek coins which are not likely to be otherwise published, so that the student may in time have before him in photographs all the known coins of a particular series on which he is working. The plates are the essential part of the book. The text, which is prepared by Mr. E. S. G. Robinson, who is editing the work for the British Academy, gives only the attribution, direction of axis and weight, and not a description of the coin in the ordinary sense. The first fascicule contains two very fine collections, that of Captain Spencer-Churchill and the small but very choice Salting Collection in the Victoria and Albert Museum. A work with collotype illustrations of 250 of the finest Greek coins is ridiculously cheap at 7s. 6d., and we hope the demand for it will encourage the British Academy to proceed with what will in time be a *Corpus of Greek Coins in English Collections*. We do not, however, share the editor's hope that this work will diminish the demand for plaster casts—on the contrary.

J. A.

XV.

THE BRONZE MEDALLIONS OF GORDIANUS III.

THE new volume of the excellent handbook of Roman coins by Mattingly-Sydenham will also contain the coinage of Gordianus III. Unfortunately, the arrangement of this work did not allow of the admission of his bronze medallions. Thanks to the courtesy of the editors of the *Numismatic Chronicle*, it has been possible to publish them here as a supplement to the coinage of Gordian in the handbook.

As I have already given an exact chronology of the coinage of Gordian there, it need only be repeated here in brief.

No medallion of him exists as Caesar, i.e. from about March to June A.D. 238.

But the year A.D. 239 already has dated medallions with the obverse legend IMP CAES M ANT GORDIANVS AVG and the reverse legends TR P II COS P P LIBERALITAS AVGVSTI II, ADLOCVTIO, and VICTORIA AVGVSTI.

No specimen with the obverse legend IMP CAES GORDIANVS PIVS AVG, which also belongs to this year, is known.

The piece with the second liberality and the obverse legend IMP GORDIANVS PIVS FELIX AVG (which corresponds with IMP GORDIANVS PIVS FEL AVG on his ordinary coinage) also belongs to the year A.D. 239.

It may be mentioned in this place that I have

classed all pieces with this long obverse legend amongst the medallions, but of the shorter legend only those which have no S C or which have the same representation on the reverse as those with the shorter legend.

I have also attributed the Vienna pieces with LAETITIA AVG N to the year A.D. 239 owing to the occurrence of this reverse in *N*, *R*, and *Æ* during A.D. 238-9.

For A.D. 240 we have a dated piece and one with AETERNITATI AVG, a legend which belongs to this year.

For A.D. 241 there are quite a number of medallions, which, in view of their frequency, have probably been struck on the occasion of the nuptial ceremony, as was the so-called wedding issue of coins.

The pieces with PROPECTIO AVG and TRAIECTVS AVG, for the latter of which Mattingly has also found the corresponding piece in gold, point to the march to Persia in A.D. 242 (*Diz. Epigr.*, p. 358).

In A.D. 243 the charming medallion-like second brass was being struck, which betrays a highly artistic style, but this issue, owing to the reverses, belongs to the ordinary coinage and has therefore not been inserted here.

The year A.D. 244 also has a dated piece, and the medallion with MVNIFICENTIA GORDIANI AVG with the circus games evidently refers to the triumphal festivities in that year.

The following pieces point to the war with Persia (A.D. 243-4): FIDES EXERCITVS, PAX AETERNA with Euphrates and Tigris, TRAIECTVS AVG with bridge, VICTORIA AVG with temple.

Now follow the undated pieces with the obverse legend **IMP GORDIANVS PIVS FELIX AVG.**

It could not be altogether avoided that some pieces already described in the handbook also make their appearance here, as in some cases a clear division between coin and medallion is very difficult.

The pieces are quoted according to Cohen (C.) or Gneecchi (Gn.); the obverse legend, with few exceptions, which are mentioned in their place, is **IMP GORDIANVS PIVS FELIX AVG.** All have the laurel wreath.

A.D. 239.

A. *Obv.* IMP CAES M ANT GORDIANVS AVG.

1. Bust, cuirassed, holding spear, r.	PONTIFEX MAX TR P II COS P P Gordian in quadriga l.	C. 283. ¹
2. Bust to waist, holding Victory on globe, r.	" "	Gn. II, 90, 28. ²
3. As on no. 1.	ADLOCVTIO AVGVSTI Gordian standing on platform l., behind praetorian prefect; in front of him, four soldiers holding standards.	C. 12.
4. Bust, cuirassed, l., hold- ing Victory on globe and sword.	" "	Gn. II. 88, 11.
5. Bust, draped, l., holding Victory.	" "	Gn. II. 88, 12.
6. Bust, draped, cuirassed, r.	LIBERALITAS AVGVSTI III Gordian accompanied by two officers, seated l.: citizen on steps.	C. 137.
7. As on no. 6.	VICTORIA AVGVSTI Gordian on horseback l., led by Victory and soldier, followed by three soldiers.	C. 379. ³

B. *Obv.* IMP GORDIANVS PIVS FELIX AVG.

8. Bust, draped, l. LAETITIA AVG N S C Laetitia standing l., holding wreath and anchor. Vienna.
9. Bust, cuirassed, l. " " " Vienna.
10. Bust, draped, cuirassed, LIBERALITAS AVGVSTI II, as on no. 6. C. 138.⁴

A.D. 240.

Obv. IMP GORDIANVS PIVS FELIX AVG.

11. As No. 10. PONTIFEX MAX TR P III COS P P Gordian standing r. accompanied by soldier carrying standard, and receiving globe from Roma seated l.; between them, soldier. C. 284.
12. Bust, cuirassed, r. " " Gn. II. 90, 31.
13. Bust, draped, cuirassed, AETERNITATI AVG Sol, radiate, standing l., raising r. hand and holding globe. Vienna.

¹ Cohen erroneously describes it as COS II, but Froehner, p. 132, quotes it correctly.² Gnechi gives TR P, in error. This specimen is in the Florence Museum, and the correct description is found in Gori III, p. 112.³ Cohen mentions that the exergue originally read COS PP, which, however, had disappeared after cleaning. This hardly seems probable, since no. 60 with the same reverse has no legend in exergue. Froehner does not quote it.⁴ Gnechi (no. 20) quotes another medallion with bust, cuirassed, r., but with the reverse of Maximinus, C. 27. Evidently a slip.

A.D. 241.

A. *Obv.* IMP GORDIANVS PIVS FELIX AVG.

- | | | |
|--|---|-----------------|
| 14. Bust, cuirassed, r., holding spear. | PONTIFEX MAX TR P IIII COS II P P Gordian in quadriga l. | Gn. II. 90, 32. |
| 15. As above. | PONTIFEX MAX TR P IIII COS II P P Gordian in quadriga, facing, crowned by Victory behind him; in front, two soldiers. | C. 291. |
| 16. Bust, draped, cuirassed, l., holding Victory on globe and sword. | " | C. 292. |
| 17. Bust, draped, cuirassed, l., holding eagle-tipped sceptre. | "
(but Gordian in quadriga l.) | C. 287. |

B. *Obv.* IMP GORDIANVS PIVS FEL AVG.

- | | | |
|---------------------------------|------------------------------|---------|
| 18. Bust, draped, cuirassed, r. | As above. | C. 288. |
| 19. Bust, draped, r. | " | C. 289. |
| 20. " | "
(but only one soldier). | Vienna. |

A.D. 242.¹A. *Obv.* IMP GORDIANVS PIVS FELIX AVG.

- | | | |
|--|---|-----------------|
| 21. Bust, draped, cuirassed,
l. | PROFECTIO AVG Gordian on horseback l., led
by Victory and soldier, followed by three soldiers. | C. 294. |
| 22. Bust, cuirassed, r. | TRAIECTVS AVG Galley r. with six rowers and
four soldiers. | Gn. II. 91, 89. |
| 23. Bust, draped, cuirassed,
l. | " " | Gn. II. 91, 40. |
| 24. Bust, draped, cuirassed,
l., holding spear and
shield. | " " | C. 342. |
| 25. Bust, draped, l. | " " | C. 345. |
| 26. As on no. 23. | " "
(small module). | C. 344. |

B. *Obv.* IMP GORDIANVS PIVS FEL AVG.

- | | | |
|----------------------|-----------|---------|
| 27. Bust, draped, r. | As above. | C. 343. |
|----------------------|-----------|---------|

A.D. 243.

Obv. IMP GORDIANVS PIVS FELIX AVG.

- | | | |
|-------------------------|--|---------|
| 28. Bust, cuirassed, r. | P M TR P VI COS II P P Gordian on horseback
l., led by Victory and soldier, followed by three
soldiers carrying standards. | C. 279. |
|-------------------------|--|---------|

¹ To this group also belongs the medallion, C. 269, and another one from Vaillant with PM TR P COS II (P P), both uncertain.

A.D. 244.

Obv. IMP GORDIANVS PIVS FELIX AVG.

- | | | |
|---|--|---------|
| 29. Bust, cuirassed, l., holding spear. | P M TR P VII COS II P P
of the Circus Maximus, with gladiators, quadrigae, etc. | C. 282. |
| 30. Bust, draped, cuirassed, r. | MVN FICENTIA GORDIANI AVG
Coliseum from above with games. | C. 161. |
| 31. As above, but holding spear and shield. | " " | C. 165. |

MEDALLIONS OF THE TIME OF THE PERSIAN WAR.

A.D. 243-4.

Obv. IMP GORDIANVS PIVS FELIX AVG

- | | | |
|---|---|------------------|
| 32. Bust, draped, l., holding spear and shield. | FIDES EXERCITVS Gordian, crowned by Victory; clasping soldier's hand; below, Euphrates and Tigris. | C. 84. |
| 33. Bust, draped, cuirassed, l. | PAX AETERNA Gordian, crowned by Victory, sacrificing; before him, Euphrates and Tigris; in the background, Sol in quadriga and three standards. | C. 172. |
| 34. As above. | TRAIECTVS AVG Gordian passing over bridge, led by Victory; before him, soldier; behind him, two soldiers. | Gn. III. 47, 68. |

35. Bust, draped, cuirassed, r.	VICTORIA AVG Circular temple with the inscription NEIKH ΟΠΛΟΦΟΡΟΣ; in front, Gordian sacrificing, accompanied by two attendants; to l., two victimarii.	C. 371.
36. Bust, draped, cuirassed, l.	" "	C. 370.
37. Bust, cuirassed, l., seen from back.	" "	Gn. II. 92, 50.
38. Bust, cuirassed, l., holding Victory on globe and sword.	" "	C. 372.
39. Bust, cuirassed, l.	VICTORIA AVGVSTI As above, but inscription ΘΕΟΣ ΟΠΛΟΦΟΡΟΣ	Gn. II. 93, 53.
40. Bust, draped, cuirassed, r.	VIRTUS AVGVSTI Gordian crowned by Virtus, receives a globe from Sol; between them, prisoner; in the background, soldiers with standards.	C. 396.
41. Bust, cuirassed, l., holding spear.	" "	C. 397.
42. As above, but also shield.	" "	Gn. II. 93, 58.

UNDATED A.D. 240-4.¹*Obv.* IMP GORDIANVS PIVS FELIX AVG.

43. Bust, draped, cuirassed, r.	ADLOCVTIO AVGVSTI Gordian, standing r. on platform, addressing four soldiers; behind him praetorian prefect; in the background, horse.	Gn. II. 87, 3.
44. Bust, cuirassed, r.	"	Gn. II. 87, 1.
45. " (but with aegis).	"	C. 5, 7. ²
46. Bust, draped, cuirassed, l.	"	C. 6, 8.
47. Bust, draped, l., holding spear and shield.	"	Gn. II. 87, 5.
48. As on no. 46.	"	C. 9.
49. Bust, cuirassed, l., hold- ing Victory on globe and sword.	(but in the background trumpet and three standards.)	C. 10.
50. As above.	As on no. 43, but to left.	C. 11.
51. Bust, draped, cuirassed, r.	AEQVITAS AVGVSTI The three Monetæ stand- ing l., each holding scales and cornucopiae; at feet of each, heap of metal.	Gn. II. 88, 13.

52. Bust, cuirassed, r., with aegis.	"	"	Gn. II. 88, 14.
53. Bust, draped, l.	"	"	C. 30.
54. As on no. 41.	"	"	Gn. II. 88, 16.
55. Bust, cuirassed, r.	TEMPORVM FELICITAS Emperor seated on globe, crowned by Victory, looking at Saturnus, who holds circle with the four seasons.		C. 341.
56. Bust, draped, cuirassed, r.	VICTORIA AVG Gordian, crowned by Victory, seated l., extending right hand towards two soldiers; between them, a figure facing; in the background, standards.		C. 368.
57. Bust, cuirassed, r., aegis.	"	"	C. 367.
58. Bust, cuirassed, l., holding Victory on globe.	"	"	C. 369.
59. Bust, cuirassed, l., holding spear and shield.	"	" (standards and eagle).	Gn. II. 92, 47. ³

¹ Cohen (164) quotes a medallion with **MONETA AVGVSTI** (from Mionnet), but this reverse is otherwise unknown with Gordian. The specimen C. 78 with **FELICITAS AVGVSTI** is also unknown.

² Gnechi attributes this variety to poor preservation. Gn. 9, variety to l., is not in Vienna.

³ Gn. 48 seems to be tooled.

260

60. Bust, draped, cuirassed,
r. VICTORIA AVGVSTI Gordian on horseback as
on no. 7. Gn. II. 98, 55.

61. As above, on *rev.* VIRTVS AVGVSTI, as on no. 56. C. 398.

KARL PINK.¹

¹ I am indebted to Mr. Heinrich Pohl, the Vienna numismatist, for the translation into English.

XVI.

THE PIPE ROLLS AND "DEFALTA MONETARIORUM".

NUMISMATISTS now recognize with increasing frequency the importance of our early state documents and take advantage of the information contained therein to assist them in arranging the various series of early English coins, and in correctly allocating individual coins to their respective mints. One of the most important series of state documents is that of the Great Roll of the Pipe, more commonly known as the Pipe Rolls. The Pipe Rolls are the most important of the Records of the Court of Exchequer. They contain the accounts of the King's revenue year by year, as they were made up by the King's Officers appointed to that service, by the Sheriffs of the Counties who acted as the King's Bailiffs, and by other ministers and debtors of the Crown. These rolls contain much valuable information of considerable importance to numismatists, but they appear to be very imperfectly understood and, consequently, infrequently used in connexion with numismatics.

Amongst the Pipe Roll entries which appear to be so little understood are those which relate to *defalta monetariorum*, or default of moneyers. These entries occur quite frequently in the rolls during the twelfth and thirteenth centuries, and relate to the moneyers of Norwich, Ipswich, Thetford, Colchester, Winchester, and York. The following are characteristic examples of these entries:

32 Henry II, 1186, under *Essex—Colchester*.

Et in defalta .iiij. monetariorum .iiij. l.

28 Henry II, 1182, under *Norfolk and Suffolk*.

Et in defalta .vj. monetariorum de Norwico et .iiij. monetariorum de Gipeswico et .iiij. monetariorum de Tedford .xiiij. l.

The late Sir John Evans, *Num. Chron.*, 1865, p. 278, says: "At Thetford . . . the citizens were fined in the 3rd of John, 1201, 'in defalcatione quatuor monetariorum'." Sir John evidently refers to an entry in the Pipe Roll of 3 John, which reads "Et in defalt[a] .iiij. monetar[iorum] de Tefford .iiij. li[bras]." By extending *defalt* to "defalcatione" the entry is made to appear as a record that the burgesses of Thetford were fined on account of irregularities on the part of their moneyers, but we know that the Thetford mint had not been in operation since 1179. A recent writer¹, after quoting the *defalta monetariorum* entries from the Pipe Rolls of 25 and 26 Henry II, relating to Norwich, Thetford, and Ipswich, says "the above entries . . . are of balances outstanding from previous years". The context of these entries, however, shows quite clearly that the records are of allowances made by the Exchequer to the burgesses of Thetford and to the Sheriff of Norfolk and Suffolk, and not of amounts paid, or owing, to the Exchequer.

From the reign of William I, to near the end of the thirteenth century, in certain towns, the farm or rent of the local mint was included in the *firma* of the burgh, or of the county. The town was allowed a certain number of moneyers, or pairs of dies, the

¹ *Num. Chron.*, 1927, p. 323.

equivalent value of which, at Norwich, Ipswich, Thetford, and Colchester, was fixed at 20 shillings per annum for each moneyer or pair of dies, but at Winchester the equivalent value of each moneyer was only ten shillings per annum. At York in 1176 a remission of 60 shillings was allowed in respect of three moneyers in default, but in 1177 we find the equivalent value of each moneyer has been reduced to one mark—*Et in defalta .iiij. monetariorum .liij.s. et .iiij.d.*—and thenceforth their equivalent value remained at one mark.

The privilege of coining in provincial towns, when not held by the King in his own hand, was usually vested in the burgesses of the town in which the mint was located. The *firma* of the burgh, including that of the mint, was generally included in the *firma* of the county. The burgesses accounted to the Sheriff, and the Sheriff, as the King's bailiff, accounted to the Exchequer. If moneyers had not been working the Sheriff made the usual allowances to the burgesses, and when the Sheriff accounted at the Exchequer he was allowed a corresponding remission in the *firma* of the County. But in some cases the burgesses preferred to hold their town in their own hands and to account direct to the Exchequer, and not through the Sheriff of the County. For instance, Norwich, down to 5 Richard I, 1193, was included in the *Corpus Comitatus* of Norfolk, and the burgesses paid their *firma* through the Sheriff, but we find it recorded in the Pipe Roll of 1194, that about Easter of that year "the citizens of Norwich paid 200 marks for the confirmation of their liberties by the king's charter and for having the city in their hand, and that they

may answer for the farm due at the Exchequer, etc." The city of Norwich was then taken out of the *Corpus Comitatus*, and thenceforth the burgesses accounted direct to the Exchequer.

The coining privilege was a valuable possession which the burgesses had purchased, and if that privilege, or any portion of it, was withdrawn, the burgesses were recompensed by a remission on the *firma* at the recognized equivalent of 20 shillings a year for each moneyer so withdrawn. As stated above, the only exceptions to that rule that have come under my notice were at York, where the equivalent value of each moneyer was one mark a year, and at Winchester, where their value was 10 shillings each. If a moneyer was withdrawn for only a short period a claim for a proportionate remission was made, and allowed, as is shown by an entry in the Pipe Roll for 15 Henry II, 1169, when the Sheriff of Norfolk and Suffolk was allowed a remission of five shillings in respect of one moneyer who was withdrawn for a period of three months.

So far as I can recall, Mr. W. J. Andrew and Major Carlyon-Britton are the only numismatists who have recognized the true meaning of these entries relating to the default of moneyers and who have appreciated their numismatic value.

On p. 423 of his *Henry I*, Mr. Andrew refers to the Pipe Roll for 1157, in which the burgesses of Thetford are "allowed an abatement from their *firma* of 40 shillings because the mint had been deprived of two of its four moneyers, and afterwards £4 per year, because the four moneyers were no longer in being". "From these inferences," he says, "it is manifest that

the permanent *firma* was £4." On p. 418 of the same work Mr. Andrew says:

The mint [of Tamworth] would be leased with its burg to its burgesses in their *firma*, and when it was not in operation its share of such *firma* would be returned to the burgesses.

And on p. 165, he says:

That the *firma* of £40 paid by the burgesses of Colchester did include the privilege of coining is quite clear, for our coins tell us that the mint of Colchester was discontinued during the issue of the first type of Henry II, and the Pipe Roll for 1157-8 shows this to have occurred in that year. For the *firma* paid by the town was still £40, but sixty shillings of it was returned to the burgesses in *defectu monetariorum de uno anno*.²

Major Carlyon-Britton, "Historical Notes on the First Coinage of Henry II", *Num. Journ.*, vol. II, quotes, *inter alia*, the "defalta monetariorum" entries from the Pipe Rolls of 1177 and earlier. Under "Colchester", he says:

Colchester would seem to have been entitled to four moneyers, and allowances of £3, representing three moneyers not at work, were made to the sheriff from the fixed rent of the county for the years 4 to 12 Henry II, and for £4 for the years 13 to 22 Henry II. It is presumed that the mint was entirely inoperative during these last mentioned years.

Under "Ipswich", after citing the years in which allowances were made to the Sheriff, he says:

These and other entries make it absolutely clear that the allowance to the sheriff, in respect of a moneyer not at work, was at the rate of £1 for one year for each moneyer. For instance, in 15 Henry II we find the entry "and in default of one moneyer of Thetford 5s. for

² The actual date of the discontinuance of coining at Colchester was 1167, and not 1158, as is shown later.

a fourth part of the year", and in 20 Henry II the entries are "and in default of five moneyers at Norwich 100s., and in default of three moneyers at Thetford 60s., and in default of two moneyers at Ipswich 40s."

And under "Norwich", he says:

The allowances made to the sheriffs from the fixed *firma* of the counties show that Norwich did not always exercise the privilege of working its full quota of moneyers. In 18 Henry II there were two short, in the following year four, in 20, 21, and 22 Henry II five, and in 23 Henry II as many as six deficient.

The late Dr. Horace Round, the eminent authority on the Pipe Rolls, in an article entitled "Colchester Mint in Norman Times" (*Eng. Hist. Rev.*, 1903), a criticism of the Colchester section of Mr. Andrew's *Henry I*, says:

The payment to the crown in respect of moneyers was included in a borough's *firma*, and when the number of moneyers was reduced an equivalent remission was made in the *firma*. Thus in the Pipe Rolls of Henry II, when the *firma* of Colchester was £40, the Pipe Rolls record annually (from 1158) a remission of £3 out of this in *defalta monete*, down to and including the twelfth year [1166]. But in the thirteenth year [1167] we find £4 remitted out of the *firma in defalta monete hoc anno*, and thenceforth this remission is repeated annually.

Mr. Andrew of course was well aware that the *firma* included the sum paid for the privilege of coining... [He says] "That the *firma* of £40 which was paid by the burgesses did include the privilege of coining is quite clear, for our coins tell us that the mint of Colchester was discontinued during the first type of Henry II, and the Pipe Roll for 1157-8 shows this to have occurred in that year. For the *firma* paid by the town was still £40, but 60s. of it was returned to the burgesses in *defectu³ monetariorum de uno anno*."

³ C. Trice Martin, in the Preface to the printed Pipe Roll for 1180, p. ix, says: "The word *def*" occurs with tolerable frequency. In these later volumes it has been printed either *defectus* or

It was the regular practice on the Pipe Rolls to make such remissions on the *firma* when the original number of moneyers had been reduced. Mr. Andrew cites for instance, from the roll of 4 Henry II, *Et in defectu monetariorum de Tetford* 40s., as showing that only two of the four moneyers were then in office, supplementing it by an entry of later years, *Et in defectu iiii monetariorum de Tetford* £4. meaning that as the four moneyers of Thetford were no longer there . . . the burgesses were allowed a remittance (*sic*) of £4, as representing the rent of the old mint. I may add to Mr. Andrew's evidence the following important passage from the Pipe Roll of 1175:

Et in defalta .v. monet[ariorum] apud Norwich c. s[olidos]. Et in defalta .iii. monet[ariorum] de Thetford .lx. s[olidos]. Et in defalta .ii. monet[ariorum] de Gippeswich .xl. s[olidos].

On the Pipe Roll of Richard I these figures are increased to six moneyers at Norwich, four at Ipswich, and four at Thetford, the total remission for their loss rising accordingly to £14.

Here we have strong evidence that (as Mr. Andrew seems to think) £1 was remitted from the *firma* for the reduction of a moneyer below the original number. . . . That reduction is made where we should expect it to be made, namely, on the *firma* which included the rent to the crown for the local mint.

Mr. Andrew's comments on the Thetford evidence are of value for comparison with his deductions from similar evidence at Colchester. At Thetford we have, as he observes, in 1158, a remission of £2 in *defectu monetariorum*, which becomes, as I have shown, later in the

defalta. It is difficult to draw any distinction between the usage of these two words from the instances where they occur in full. Both *defalta monete* and *defectus monete* find a place in rolls already printed, where the meaning must be the same. When employed with persons, *defalta* is preferred, is *defalta monetariorum* . . . but when coupled with a noun such as *molendinum* . . . *defectus* seems to be the more usual, meaning 'failure' But on the other hand, it is also used to qualify *instauramentum*, *bladum*, where 'deficiency' 'lack' must be the sense. The same meaning must be borne by *defalta* in the phrases *defalta monete*, *defalta bosci*, *defalta pasture*".

reign £3 in *defulta iii monetariorum*, and finally £4 in *defectu iiii monetariorum*, as cited by him from the roll of 3 John. From this he infers, justly enough, that the four moneyers of Thetford were gradually abolished, £1 being remitted from the *firma* for each moneyer reduced. At Colchester the remissions are £3 in 1158 and £4 from 1167 (13 Henry II), the latter representing, as we subsequently learn, four moneyers. These figures, on his own showing, clearly prove that the Colchester mint was not discontinued, as he asserts, in 1158, but must have remained in operation till 1167, the burgesses paying till then £1 "for the still remaining moneyer in office".

It can be proved that the reduction of £4 in the ferm of Colchester was made in consideration of the non-existence of four moneyers. The roll of 1 Richard I, 1189, enters it as *In defulta iiii monetariorum iiii li*, and an Exchequer record of 22 Richard II (printed in Madox's *Firma Burgi*), shows that since the later years of Henry II its burgesses had been entitled to a yearly remission of £4 in *defectu quatuor monetariorum*.

In the foregoing quotation Dr. Round refers to an Exchequer record of 22 Richard II (1399). In that year the men of Colchester were charged by the summons of the Exchequer with £42 for the *firma* of their town. The Barons of the Exchequer issued a writ of *Scire facias* to the Sheriff of Essex, to warn the men of Colchester to show cause why they should not be charged to the King every year with the entire sum of £42 for the *firma* of their town.⁴ The towns-

⁴ In this document the annual *firma* of Colchester is stated to be £42. The Pipe Roll accounts, however, show that the *firma* was £40 *blancum*, or blanchéd money. The money paid into the Treasury by the King's farmers was, in many cases, tested by combustion, or trial by fire. This combustion was either real or nominal. Real when the money paid in was melted down to a certain weight and fineness; nominal when, in lieu of the actual test by melting, a certain amount was added to the sum of their farm. From the latter part of the thirteenth century the usual practice was to add one shilling for each pound, and one penny

men claimed a remission of £7 a year from their *firma*. Before the case could be tried Richard II had died and a fresh writ was issued in the first year of Henry IV. After many delays the case was heard and the Treasurer and Barons of the Exchequer commanded that the townsmen of Colchester be allowed the £7 per year, in accordance with their claim, so that they be discharged for ever. "That the said men of Colchester have full allowance of the said seven pounds, as well for the time past as for the time to come and that the said men and their successors be discharged and acquitted thereof".

Amongst the remissions then confirmed to the burgesses of Colchester was that of £4 per year in default of the four moneyers to which the town was entitled, as recorded in the Exchequer document cited by Madox in his *Firma Burgi*, and of which the following is a translation:

P. 144, col. 2:

... Because the burgesses (*homines*) of Colchester ought to have allowed them each year in their said farm the said seven pounds, namely, 40 shillings in default of the wood of Kingswood, and 20 shillings in alms granted to the monks of Colchester, and £4 in default of four moneyers, such as it has been customary to allow them from time beyond memory, viz., from the 32nd and 33rd years of King Henry II, and other diverse years preceding, as appears from the Rolls of those years, and because the said Sheriff [of Essex] never received the £7 aforesaid during that period into his accounts.

P. 146, col. 1:

And thereupon, the said men of Colchester ask that that allowance of the said £7 should be yearly made them

for each additional 1s. and 8d., or portion of 1s. and 8d. paid into the Treasury. Hence £40 *blancum* = £42.

in the said farm of their said town both for the time gone and to come, viz., for default of the four moneyers, £4; for default of the wood of Kingswood, 40 shillings, and for the alms given as ordained by divers Kings of England to the monks of Colchester, 20 shillings, by virtue of the said writ.

The reference given by Madox for the above-quoted document is "Michaelmas Communia, 22 Rich. II, Rot. 26". This would appear to indicate the *King's Remembrancer's Memoranda Roll* of that date, but a search of that Roll has failed to disclose the document cited by Madox, and the second paragraph quoted above is obviously of 1 Henry IV. Probably the document cited by Madox was not derived entirely from one source.

There can be no possible doubt as to the accuracy of Dr. Round's statement that "The payment to the crown in respect of moneyers was included in the borough's *firma*, and when the number of moneyers was reduced an equivalent remission was made in the *firma*", and that "It was the regular practice on the Pipe Rolls to make such remission on the *firma* when the original number of moneyers had been reduced".

Dr. Round's statements are fully borne out by the coins in our cabinets. For instance, Colchester was allowed four moneyers. The Pipe Roll entries show that from 1158, the year of the commencement of Henry II's first coinage, down to 1166, the Sheriff of Essex was allowed a remission of 60 shillings per year "in defalta [iii] monetariorum" in Colchester, and from 1167 onward the remission is "in defalta iiij monetariorum iiijl"; and this remission of £4 yearly in respect of the four moneyers "in default" was

allowed, as I have previously shown, year by year, and was confirmed two and a half centuries later, and presumably this remission continued so long as that fiscal system was in force. Thus, from 1158 to 1166 only one moneyer at a time was working at Colchester, and in 1167 the mint was closed. This is fully borne out by the Colchester coins of Henry II's "Tealby" type, which show that only one moneyer at a time was working there, and we know that the Colchester mint was not re-opened for the great re-coinage of 1180, nor was it again in operation until the middle of the seventeenth century when the Colchester siege pieces were issued.

Thetford had four moneyers. The Pipe Rolls show that from 1158 to 1160 the Sheriff of Norfolk and Suffolk was allowed a remission of 40 shillings annually "in defalta ij monetariorum de Tedford"; from 1161 to 1163 a remission of 20 shillings in respect of one moneyer in default; from 1164 to 1168 no remission was made in respect of moneyers, and in 1169 a remission of five shillings was allowed in respect of one moneyer "in defalta" a fourth part of the year. In 1170 and 1171 we find a remission of 20 shillings for one moneyer in default; in 1172 and 1173 a remission of 40 shillings in respect of two moneyers, and, from 1174 to 1179, 60 shillings was remitted annually in respect of three moneyers in default.

Thus, from 1158 to 1160 two moneyers were working at Thetford; from 1161 to 1163 three moneyers were working; from 1164 to 1168 the full number were working; in 1169 three moneyers were working the whole year, and the fourth moneyer was working nine months only; in 1170 and 1171 three were working;

in 1172 and 1173 two; and from 1174 to 1179 only one pair of dies were in operation. We know that the Thetford mint was not in operation for the 1180 recoinage and, accordingly, in that year we find that the Sheriff obtained a remission of £4 in respect of the four moneyers in default. This remission continued year by year, certainly down to 1230, which is as far as I have searched the rolls in relation to the Thetford mint.

Ipswich had six moneyers, but as two of them went with the *tertius denarius* of the burgh, the burgesses were concerned with only the remaining four. From 1158 to 1160 remission of £4 per annum was allowed in respect of these four moneyers "in defalta"; from 1161 to 1163, 20 shillings per annum was remitted in respect of one moneyer; from 1164 to 1172 we find no record of remissions; from 1173 to 1177, 40 shillings per annum was remitted in respect of two moneyers; and from 1178 to 1214, and from 1218 to 1230, we find a yearly record of the remission of four pounds in respect of four moneyers in default. This shows that the burgesses' mint was not in operation during the first three years of the "Tealby" type, but was reopened in 1161 with three moneyers, and so continued till 1163. From 1164 to 1172 the mint was in full operation, but from 1173 to 1177 two moneyers only were working; in 1178 all four moneyers had been withdrawn and the mint closed; and so it continued thenceforth.

Following the conspiracy and fall of Ralph de Guader, Earl of East Anglia, in 1075, his earldom was confiscated and its territory divided amongst the adherents of the Conqueror. To Roger Bigod was entrusted the burgh of Ipswich, *in manu Regis*, but

Alan, Earl of Brittany, received, *inter alia*, the *tertius denarius* of Ipswich, and with it the *tertius denarius* of the mint of Ipswich. Mr. Andrew, *Henry I*, p. 231, suggests that the claims of Alan were limited to a monetary payment, but it is evident that at a later period, Conan, Earl of Brittany, held immediate jurisdiction over two of the Ipswich moneyers. In the Pipe Roll of 1130 we find no record of payment to the Earl of Brittany as holder of the *tertius denarius* of Ipswich, but in the Pipe Roll of 1156 it is recorded that Conan, then Earl of Brittany, received £9 10s. 0d. as the *tertius denarius* of the "County of Ipswich".

Mr. Andrew (*Henry I*, p. 233), suggests that Bigod obtained possession of the *tertius denarius* of Ipswich, and also full control of the mint; that upon the accession of Henry II, Bigod's castles were reduced and he was deprived of the control of the mint of Ipswich, and that Henry revived the old third penny of the *Comitatus* of Ipswich, "less the fees of the mint", in favour of the Earl of Brittany. There can be no doubt, however, that in 1178 the Earl of Brittany held the third penny of the mint as well as the third penny of the burgh of Ipswich.

Our Ipswich coins from the beginning of the eleventh century down to the reign of Stephen suggest that there were then four moneyers, and the annual fee of £4 mentioned in Domesday, presumably representing the usual £1 per moneyer, confirms that suggestion. There can be no doubt, however, that in the early part of Henry II's reign, Ipswich had six moneyers, from which circumstance we may assume that when Henry II revived the old third penny of the *Comitatus* of Ipswich, he also increased the number of royal moneyers

to six, two of which he included in the newly revived *tertius denarius* of the burgh.

In the Pipe Rolls from 1178 to 1183, we find recorded, under "The Honor of Earl Conan", which was "farmed" by Ranulf de Glanville, an annual remission of 40 shillings allowed *in defalta .ij. monetariorum de Gipeswiz*. These entries relate to the two moneyers who, as stated above, were included with the *tertius denarius* of Ipswich, which formed part of the Conan Honor. Although the holder of the Conan Honor did not issue coins in the early part of the Short-Cross period, he appears to have exercised his privilege from the time of the re-coinage of 1205 down to about 1218, and issued coins, by the moneyers Alexander and John, in Mr. Lawrence's Classes, Va, Vb, and Vc, of the Short-Cross series. This suggestion is made upon the assumption that as the burgesses, from 1178 to 1212, and again in 1214 and 1218, were allowed an annual remission of £4 in respect of their four moneyers "in default", they were allowed a similar remission in 1213, 1215, 1216, and 1217, for which years the Pipe Rolls are missing, in which case the Ipswich coins of Classes Va, Vb, and Vc, could have been struck only by authority of the holder of the *tertius denarius* of Ipswich.

In the Pipe Roll accounts of the Conan Honor, prior to 1178, we find no mention of the two moneyers, which seems to imply that down to 1177 they were working, together with the four royal moneyers of the burgesses, at Ipswich, and that all six were withdrawn in that year, hence the annual remission of £4 to the burgesses and £2 to the holder of the Conan Honor, from 1178 onwards.

Winchester had eight moneyers. During the reign of Henry II, down to and including 1180, we find no record of remissions in respect of Winchester moneyers in default. In 1181 a remission of £4 was allowed in respect of eight moneyers in default, and from 1182 to 1197, which is as far as the printed Pipe Roll volumes go, we find a yearly remission of 50 shillings in respect of five moneyers in default. Thus the Winchester mint was in full operation, with its eight moneyers, down to 1180; in 1181 the mint was not in operation, and from 1182 onwards only three moneyers were working, the other five having been withdrawn. This is quite in accordance with what we know of the Short-Cross coins, which appear to indicate that four moneyers were working from the commencement of the Short-Cross issue down to near the end of Richard I's reign; the fourth moneyer being, presumably, the Bishop's moneyer.

York also had eight moneyers. In the reign of Henry II, down to 1175, we find no record of remissions in respect of moneyers in default. In 1176 we find the entry—*Et in defalta iij monetariorum de Eboraco.lx.s.*, thus showing an allowance of 20 shillings each for the three moneyers in default. In 1177 we find that—*In defalta iiij monetariorum .liij.s. et .iiij.d.* was remitted, and in 1178—*Et in defalta v. monetariorum.v.m.* Thus the equivalent value of each moneyer was immediately reduced to 13s. 4d. In 1179 we find a similar entry, and from 1180 to 1230 we find a yearly remission of eight marks in respect of eight moneyers in default. Thus from 1176 to 1179 the York moneyers were gradually reduced and from 1180 onwards the whole eight royal moneyers were withdrawn. Im-

mediately after the withdrawal of the royal moneyers, the mint in which they had worked appears to have been demolished for, in the Pipe Rolls from 1182 to 1189 we find the Sheriff of Yorkshire debited with 13s. 4d. rent for "land on which the old moneyers' smithy in York was", *terra ubi vetus fabrica monetariorum Eboraci fuit*. The York coins of this period show that from about 1180 to about 1222, three, or possibly four, moneyers were working there at one time. These would, of course, be the moneyers of the Archbishop.

It does not appear to be generally known that the Archbishop of York was, at that period, entitled to four moneyers. That is, however, proved by a writ recorded in the *Close Roll* under date 20 July 1248, of which the following is a translation:

Of the dies of Walter, Archbishop of York. Because the King is satisfied by inquisition he directed to be made that Archbishop Walter and his predecessor have by custom had and ought to have two dies and not less in the City of York whenever we the King have four dies there, and if the King shall multiply his dies [there] the said archbishop ought by the said custom to have more dies: so, that is to say, that he shall always have the third die whenever the King shall decide to multiply his dies beyond four.⁵

The Pipe Roll entries from 1180 onwards show that York was allotted eight royal moneyers, hence the Archbishop's "third die" entitled him to four moneyers.

⁵ The phrase, not very clearly expressed, entitles the archbishop to a proportion of two dies to every four held by the king not only to a third die when the king possesses any number above four. The phrase is: "et si rex multiplicaverit cuneos suos, predictus archiepiscopus plures habere debet de consuetudine predicta; ita scilicet quod semper tercium habebit cuneum secundum quod rex ultra quatuor cuneos suos multiplicare voluerit".

In the *Patent Roll* for 2 Henry III, 1218, are recorded two writs by which the King commits to the charge of W. Marshal junior, the money Exchanges at London, Canterbury, Winchester, Durham, York, and St. Edmundsbury, or such proportion of those Exchanges as pertain to the King. This has been understood to imply that the six mints also were placed under W. Marshal's charge. Such, however, could not have been the case at either Durham, York, or St. Edmundsbury, which were ecclesiastical mints. The entry relating to York reads—"In like manner was it written to the Mayor and provosts of York for the said W. Marshal junior, as to the Exchange there belonging specially to the King", *Eodem modo scribitur majori et prepositis Eboraci, pro eodem de cambio monete Eboraci specialiter ad dominum regem pertinente*, which clearly indicates that, so far as York was concerned, the writ referred to the Exchange only and not to the mint.

In the *King's Remembrancer's Memoranda Roll* of 2 Henry III, 1217-18, we find the following entry:

York. Keepers of the King's four dies: Richard of Rupe, Martin of Allewarthorp, Geoffrey Seler, Adam of York, who received the said four dies on Sunday next after the Feast of St. Andrew [3rd Dec., 1217]. These are the keepers for the Archbishop's dies: Henry Muchaz and Thomas le Furber, who received his two dies the same day.

The King's moneyers: John of Lue, Peter son of Robert, William Brunman, Thomas son of Warin; and the Archbishop's: Adam Flower and John of Warthull.

The King's assayer: Thomas the Goldsmith; the Archbishop's: Ralph the Goldsmith.⁶

⁶ In the corresponding entry in the *Lord Treasurer's Remembrancer's Memoranda Roll* of the same year, we find Adam Fleur

John, Peter, William, and Thomas are the four moneyers whose names occur on the York Short-Cross coins of Class VI, which Mr. Lawrence assigns to the years 1218-1222.

The foregoing record of December 1217 which, incidentally, confirms Mr. Lawrence's date, would appear to indicate that in that year the King (i.e. the burgesses), was about to reopen the royal mint and had reduced the number of moneyers to four, which would have entitled the burgesses to a remission of 4 marks annually in default of the remaining four moneyers. On that reduction the Archbishop, as stated in the record, would have only two moneyers. We know, however, from the coins, that the two moneyers, Adam Flower and John of Warthull, who are in the foregoing record assigned to the Archbishop, did not make use of the dies then delivered to the Archbishop. On the other hand we have coins of Class VI struck by the four men named as the King's moneyers, yet we learn from the Pipe Rolls that from the year 1180 to 1230, which must include the period of issue of Class VI, the burgesses were allowed their usual annual remission of eight marks *in defalta VIII monetariorum*, thus proving that the royal or civic mint was not in operation during that period.

It is impossible to reconcile these statements as they stand, and we can only assume that the appointment of the four men named in the *Memoranda* record as royal or civic moneyers, was made in error and

and [W]ydo Warthul given as the Archbishop's moneyers, and Erisius filius Ma . . . and Thomas le Furbur as his *custodes cuneorum*.

afterwards cancelled, and that the four moneyers were transferred to the Archbishop.

So far as I am aware the only other reference to the York mint in 1218 is contained in a writ dated May 9th of that year, recorded in the *Close Roll*, and is as follows:

The King to the Sheriff of Yorkshire greeting. We command thee strictly enjoining it, that thou cause our venerable father, lord Walter, Archbishop of York, to have well and freely his diēs of our money in our city of York, as well and as freely as his predecessors Archbishops of York ever had them, saving to us our right which pertains to us therein.

In the same manner it is written to the Mayor of York.

Roger of Pont l'Evêque was elected Archbishop of York in 1154 and died in November 1181. The see remained vacant until 1189, when Geoffrey Plantagenet, illegitimate son of Henry II, was elected. He quarrelled with John in 1207, left England, and did not return, but died abroad in 1212. No election was made to the see until 1215, when Walter Gray, Bishop of Worcester, was elected. Thus the see was vacant from 1181 to 1189, and from 1212 to 1215.

Mr. Andrew, *Henry I*, pp. 133, 185 and 487, argues that when a see was vacant the King held the revenues of the see in his own hands but, in accordance with an invariable rule, no coins were issued during the interregnum. It is, however, quite evident that coins were issued from the York ecclesiastical mint during the interregnum 1181-9, for we have coins of that mint struck by at least three moneyers in Class Ia, by no less than eight moneyers in Class Ib, including those who struck in Class Ia; and two in Class Ic. By Turkil, who was working in Classes Ia and Ib,

we have no coins of Class Ic, but it appears probable that he was working in Class Ic also, and that his coins of the latter class will turn up eventually. According to Mr. Lawrence's chronology of the Short-Cross coinage, Class II commenced *circa* 1189, the year in which Geoffrey was elected to the archbishopric; consequently the 1181-9 interregnum would cover practically the whole period of issue of Class I, with its subdivisions.

Norwich was allowed six moneyers. From 1158 to 1163 all six appear to have been working. From 1164 to 1171 the Pipe Rolls record the annual remission of 20 shillings in respect of one moneyer in default; in 1172, 40 shillings in respect of two moneyers in default; in 1173, 80 shillings in respect of four moneyers; from 1174 to 1176, £5 in respect of five moneyers, and from 1177 to 1212 we find recorded the annual remission of £6 "*in defalta vi monetariorum*". The rolls for 1213, 1216, and 1217 are missing, and for 1215 there remains the roll for six months only, viz., the portion recording the accounts from Michaelmas 1214 to Easter 1215, in which the Norwich moneyers are not mentioned. In 1214, and from 1218 to 1234, we find recorded, as from 1177 to 1212, the annual remission of £6 in respect of six moneyers in default.

From these entries it is manifest that from 1164 to 1176 the royal moneyers were gradually withdrawn from the Norwich mint, and that from 1177 onwards, through the whole period of issue of the Short-Cross series, in the reigns of Henry II, Richard I, John, and Henry III, the royal mint at Norwich was completely inoperative.

About 1280 the citizens of Norwich were pressed for

the payment of arrears of their fee farm rent. They then petitioned the King that £6 per annum for the removal of the six moneyers from Norwich and 25 shillings per annum which the nuns of Carrow received from the said town might be deducted from their debt, stating that it had not been allowed to them since 18 Henry III (1234). As previously stated, the Pipe Rolls record that the remission of £6 in default of six moneyers was allowed year by year down to 1234, after which it appears to have ceased.

In the city archives of Norwich is preserved: (1) a copy of the petition to the King; (2) a copy of a letter from the Barons of the Exchequer to the King concerning the subject matter of the petition; and (3) a copy of the King's reply thereto, of which documents the following is a translation:

(1) The citizens of Norwich beg that the £6 annually for the six moneyers, and the 25 shillings annually which the nuns of Carrow receive of the same town may be allowed to them in the farm of their town, and the arrears of the same town, which allowances were accustomed to be made to them in the said farm, and have not been made from the eighteenth year of King Henry [1234] until the eighth of this King [1280], namely, during forty-three years (*sic*), and the said allowance is, according to the arrears during the said time, £311 15s. which the said citizens beg may be allowed them in the arrears of the said farm, and in other debts which they owe to the King.

(2) To the Lord King by the Treasurers and Barons greeting. At your mandate the rolls of the same your Exchequer having been examined, we signify to your sovereignty that in the time of Lord John your grandfather, and in the time of Lord Henry your father, and in the time of your predecessors, Kings of England, up to the nineteenth year of the same Lord Henry your father [1235], there were allowed to your citizens of Norwich in the farm of their town six pounds annually which ceased for them [as a matter of obligation] through the

taking away of the six moneyers which formerly they were accustomed to have in the said town, and 25 shillings annually which the nuns of Carrow receive of the said farm. And any reasonable cause does not appear why the said six pounds annually and the said 25 shillings annually as before, ought not to be allowed to them. Except only that it was prohibited by the Lord Henry your father that such allowance should not be made in future without his special precept, &c.

(3) The King to his Chancellor greeting. We command you that, the letter which our citizens of Norwich bear to you having been accepted, you seal [it] under the seal of the Exchequer. And that you cause them to have what is just and of reason according to the tenor of that letter.

It may be argued that the inclusion of Norwich in the oft-quoted writ of October 7th, in the ninth year of John (1207), in which the moneyers and other officers of the mints of sixteen towns were ordered to attend at Westminster in the following January, indicates that the royal mint at Norwich was then in operation. That, however, does not necessarily follow. Writs were probably issued in 1205 to the burgesses of Norwich, Ipswich, and York, as well as to the other thirteen towns enumerated in the writ of 1207, ordering them to appoint moneyers, custodes cuneorum, &c., but the "defalta monetariorum" entries in the Pipe Rolls prove that in 1207 those warrants had not been acted upon, or at any rate, the royal moneyers of those three towns had not been working. Many such writs were issued, but not acted upon. We have the parallel case of the burgesses of Nottingham to whom a writ, dated 10 October 1248, was issued ordering them to appoint four moneyers, four custodes cuneorum, two assayers, &c., and to prepare to open a mint there.⁶ The con-

⁶ *Lord Treasurer's Remembrancer's Roll Memoranda*, 32 Henry III, 1248.

ditions laid down in this writ are identical with the conditions laid down for the opening of the mints at Bristol, Carlisle, Hereford, Ilchester, Newcastle, Shrewsbury, Wallingford, and Wilton, to the burgesses of which towns similar writs were issued on the same date as the Nottingham writ, but there can be no doubt that, even if dies were made and sent to Nottingham, the mint was not opened and the dies were not used. We have also the example of the writ of 21 February 1222, in which Henry III orders that:

... On the fifteenth day after Easter in the sixth year of our reign [i.e. on 18 April 1222] a rounded half-penny and a rounded farthing shall be current throughout our land of England; and ... that from and after that day no halfpenny or farthing shall be current ... if it be not rounded; and that no one if he loves his body or his goods shall buy or sell at peril of forfeiture with halfpenny or farthing if it be not a rounded halfpenny or farthing, nor shall any after that prefixed date take, in any sale or purchase, a halfpenny or farthing, unless it be a rounded halfpenny or farthing ...

Copies of this writ were ordered to be sent to every Sheriff in England. The writ, however, does not appear to have been acted upon for we have no round halfpennies or farthings of the reign of Henry III.

That the royal or civic mint at Norwich was closed in 1177, and was not re-opened until 1248, there can be no doubt, yet we have Short-Cross coins of Classes Va, Vb, and Vc, struck by the moneyer John, and reading **NORW**, &c., which were undoubtedly issued at Norwich between 1205 and 1218. There are also coins of Class IV by John, reading **NOR**, which were obviously struck by the same moneyer, and which must be allocated to Norwich. We have coins of the first coinage of Henry II, struck at Norwich by the moneyer

William, and as we have also Short-Cross coins of Classes Ib, IIIb, and IV, reading **WILLIUM ON NO**, and **WILLIUM ON NOR**, it is only reasonable to assume that they also were struck at Norwich. But by whose authority were these coins struck?

As Mr. Andrew points out (*Henry I*, p. 328), at the time of Domesday the *firma* of Norwich mint was included in that of the burgh "and it is expressly stipulated that the Bishop of East Anglia was entitled to one of its moneyers when he wished". Mr. Andrew adds—"We know from charters of Henry II and Richard I that Norwich was a royal mint, and there is no evidence as yet forthcoming that the Bishop ever exercised his privilege of a moneyer in it".

In the Pipe Roll of 8 Henry II, 1162, under "Norfolk and Suffolk", it is recorded that the Sheriff "owes £10 for Richard the moneyer". In 1163, 1164, 1165, 1166, and 1167, we find that "Richard the moneyer owes £10, but he has fled into Scotland". He appears to have returned in 1168, in which year the Pipe Roll records that:

Richard the moneyer renders account of £10 for a fine. He has paid into the treasury 13s. and 4d., and owes £9 6s. and 8d.

In 1169 is recorded a further payment of one mark, leaving £8 13s. 4d. owing. In 1170 Richard paid one mark and left £8 owing. In 1171, and again in 1172, he paid one mark, leaving, in the latter year, £6 13s. 4d. owing. In 1173 and 1174 the debt of £6 13s. 4d. is recorded, but no payment was made. In 1175 we find that:

Richard the moneyer owes £6 13s. 4d. which should be sought for from the moneyers of Norwich.

The Exchequer officials, however, appear to have failed in their endeavour to collect the debt from the moneyers as a body, and in 1176 it is recorded that:

Richard the moneyer renders account of £6 13s. and 4d. for a fine. In pardon by the King's writ, to John Bishop of Norwich, £6 13s. and 4d. And he is quit.

There can be little doubt that this Richard was the Richard of the Norwich coins, and the latter entry indicates quite clearly that Richard was the Bishop's moneyer; consequently we know that the Bishop, during the issue of Henry II's first coinage at least, had exercised his privilege of a moneyer in Norwich. That being so, and in view of the fact that all royal moneyers were withdrawn from Norwich from 1177 to 1248, the coins struck by the moneyers William and John must have been issued by authority of the Bishop.

The Bishop was entitled to only one moneyer at a time, consequently we are confronted with the difficulty created by the coins struck by the moneyer Gefrei in Classes Vb and Vc, which read **NOR**, **NORW**, and **NORV**. They could not have been struck for the Bishop, because his moneyer, John, issued coins in Classes Va, Vb, and Vc. In the British Museum collection and also in my cabinet are coins of Class Ib of the Northampton mint by the moneyer Gefrei. The two coins appear to have been struck from the same dies and read **GIFREI·ON·NORÆ**. Is it not possible that the contracted mint-form **NORW**, **NORV**, was a die-sinker's error for **NORÆ**, **NORT**, or **NORH**, and that Gefrei's coins of Classes Vb and Vc, which have previously been attributed to Norwich, should be transferred to Northampton?

Prior to 1865 the various classes of Short-Cross coins struck by the moneyer Reinald, Renald, Renaud, and reading **NO, NOR**, were generally described as "Northampton or Norwich", but in 1865, Sir John Evans, in his "Short-Cross Question" arbitrarily attributed them to Norwich and subsequent writers on the Short-Cross series have followed him in so allocating them. There are, however, recorded coins of the "Tealby" type of Henry II reading **REIN[ALD] * ON * NORH, &c.**, struck at Northampton, and it is only reasonable to assert that we must now transfer also to Northampton the Short-Cross coins inscribed **REIN[ALD], REN[ALD], REN[ALD]**, with the contracted mint-form **NOR, NO, &c.**

Northampton had four moneyers. The Pipe Rolls contain many entries relating to the Northampton mint and moneyers, but in no case, with the exception of one entry in the Roll of 1205, is the number of moneyers indicated. Prior to 1182 the moneyers are frequently mentioned, but from 1182 onwards, certainly to the early years of Edward I, we read only of the moneyers' smithy or moneyers' smithies. From 1182 to 1190 we find it recorded annually that "The Sheriff renders account of 60s. for the smithy of the moneyers of Northampton". From 1191 to 1193 the entries state that the 60s. annually is for three moneyers' smithies. From 1194 to 1205 neither payments nor arrears are recorded in respect of the mint, with the exception of 1198, when we find it recorded that "Geoffrey fitz-Walder rendered an account of £10 to be quit of the custody of the coinage (*monetarii*) of Northampton; that the die in his charge be broke, and that he be not again compelled to that office". It is further recorded that

2s. 6d. was paid for "conveying the King's treasure from Northampton to Westminster".

The foregoing extract from the Pipe Roll of 1198 demonstrates beyond doubt that the Northampton mint was closed in or before that year; it is, however, difficult to explain the silence of the Pipe Rolls in respect of the mint dues after 1193 except upon the assumption that the mint ceased operations in 1193. But that assumption will not hold good because we have Northampton coins of Classes III and IV, and the Pipe Rolls of 1194 and 1195 contain indirect yet conclusive evidence that Classes III and IV were in issue in those years.

That four moneyers were working at Northampton in the early part of the Short-Cross period is shown by the fact that Filipe, Hugo, Raul, and Walter were working in Class Ia, and that those four moneyers also continued to strike in Class Ib. In Class Ib we have coins struck by no less than seven moneyers, including Reinald whom I have transferred from Norwich, but only two, Walter and Reinald, appear to have been working there in Class Ic. Of Class II no Northampton coins are known; of Class IIIa we have coins by Randul, Robert, and Walter, and of Class IV we have coins by Randul and Reinald, or Renaud, from which it appears that after Class Ib coinage at Northampton was intermittent and the number of moneyers employed was irregular. The late Dr. Horace Round in the Introduction to the printed Pipe Roll of 1182 says: "The new coinage . . . appears to have been practically completed by Easter 1182. Solitary changers were at work in London, at Worcester, and at Northampton, but only for the first half of this financial year," from

which it would appear that the bulk of the early Short-Cross coins, i.e. Classes Ia and Ib, were issued by Easter 1182, after which time coins were issued only in response to the local demand.

From the *Fine Roll* of 7 John, 1205-6, we learn that:

Peter de Stokes gives 60 marks to have four dies at Northampton, and an Exchange there from the Nativity of St. John the Baptist in the King's seventh year [24th June 1205], for one year. Mandate to Reginald de Cornhill to cause him to have the dies and to permit him to have that Exchange. Mandate also to William Fitz-Otho to see to it that he has those dies.

This is confirmed by an entry in the *Pipe Roll* of 7 John, 1205, under "Northamptonshire" where we read that:

Peter de Stokes [owes] 60 marks for having four dies at Northampton, and the Exchange there from the Nativity of St. John the Baptist in the [King's] seventh year for one year.

And in the *Pipe Roll* of the following year, 8 John, is recorded the payment of the 60 marks.

These entries appear to be the only instance in which a specific date is given for the re-coinage of 1205. The mints of London and Canterbury would be in operation earlier than the provincial mints, and the date of the opening of the Northampton mint (June 24) indicates that it was in operation quite as early as other provincial mints, yet we have Class Va coins by only one moneyer, viz., Renald, Renaud.

The coins constituting Class Va have been considered a separate class, issued in 1205 for a short time only and preceding Class Vb,⁷ but if that were actually the

⁷ *Brit. Num. Journ.*, vol. xi, p. 76.

case we should expect to find Class *Va* coins struck at Northampton by its four moneyers, all of whom were evidently working from the commencement of the re-coinage of 1205. The fact that we have Class *Vb* coins by Adam, Roberd, and Roberd T., and none of Class *Va* by those three moneyers, suggests that Classes *Va* and *Vb* were not consecutive issues but were issued contemporaneously, and that the peculiarities exhibited by coins of Class *Va*, the reversed S on the obverse, the cross pommée mint-mark, and the exceptionally careful manner in which certain of the dies were prepared, probably exhibit the idiosyncrasies of individual die-sinkers and indicate the work of one or two exceptionally skilful workmen. A table summarizing the Pipe-Roll remissions in *defalta monetariorum* follows.

WM. C. WELLS.

TABLE SHOWING YEARS AND NUMBER OF MONEYES
NOT WORKING.

[NOTE.—The table does not include the moneyers of the Bishop of Norwich (1), the Bishop of Winchester (1), and the Archbishop of York (4).

	NORWICH (6 Moneyers)	IPSWICH (4 Moneyers)	THETFORD (4 Moneyers)	COLCHESTER (4 Moneyers)	WINCHESTER (8 Moneyers)	YORK (8 Moneyers)
1158-1160	—	4	2	3	—	—
1161-1163	—	1	1	3	—	—
1164-1166	1	—	—	3	—	—
1167-1168	1	—	—	4	—	—
1169-1171	1	—	1 ⁸	4	—	—
1172	2	—	2	4	—	—
1173	4	2	2	4	—	—
1174-1175	5	2	3	4	—	—
1176	5	2	3	4	—	3
1177	6	2	3	4	—	4
1178-1179	6	4 ⁹	3	4	—	5
1180	6	4	4	4	—	8
1181	6	4	4	4	8	8
1182-1197	6	4	4	4	5	8
1198-1230 ¹⁰	6	4	4	4	?	8

⁸ In A.D. 1169, the one Thetford moneyer shown on the table was withdrawn for three months only, and in A.D. 1170-1, he ceased work the whole year.

⁹ The Ipswich figures do not include the two moneyers who were included in the *tertius denarius* of the *Comitatus* of Ipswich, for which see pp. 272-4.

¹⁰ The Rolls for the years A.D. 1213, 1215, 1216, and 1217, are in part or wholly missing.

XVII.

THE COINAGE OF THE SULTĀNS OF MĀLWĀ.

IN 1904 a paper entitled "History and Coinage of Mālwā" by Dr. L. White-King appeared in the *Numismatic Chronicle*. The history of this little kingdom, carved out of the Dehli Sultanate in the fifteenth and sixteenth centuries, has been re-written quite recently for the *Cambridge History of India*, vol. iii, and there is no need to recapitulate it. But the past twenty-seven years have been fruitful in bringing to light a considerable amount of fresh numismatic material, and the time seems to have arrived when a revised "Coinage" may usefully be published.

The basis for the present catalogue is my own collection, formed roughly between 1900 and 1930, some of the coins in which are included in Dr. White-King's list. But the cabinets of the British Museum, volume ii of the *Indian Museum Catalogue*, manuscript catalogues of Mālwā coins in the Provincial Museum, Lucknow, and the cabinet of Mr. G. T. M. Hamilton of Allahabad, and the coins belonging to Mr. P. Thorburn and to the Royal Asiatic Society have been examined and have yielded a number of types and varieties not represented either in my collection or in Dr. White-King's list. These I have incorporated in this Catalogue and have distinguished by the letters A, B, or C, added to the serial number, which they appropriately follow.

There are two characteristics peculiar to the coins of the Mālwā Sultāns which render them more than

usually interesting—their shape and their ornamentation.

From 880 A.H. (A.D. 1475) down to the end of the series nearly a hundred years later, the coinage was almost exclusively restricted to square issues. These had been started by Maḥmūd I in "billon" as early as 845 H., but it was his son Ghiyāṣ Shāh who crystallized the practice and extended it to gold, silver, and copper. Square coins had been struck sporadically by the Dehlī Sultāns and were to be employed again by Akbar and Jahāngīr, but in Mālwa they were the rule, not the exception, so much so that we find that even Bahādur Shāh of Gujarāt, who held the kingdom in subjection from 937 to 941 H. (*vide* No. 89), and Ibrāhīm Lodī of Dehlī, who held Chanderi for a time (No. 88), were not above following the local tradition. Akbar also, after his conquest of Mālwa, issued square coins from his Mālwa mint—Ujjain.

Of still greater interest is the exclusive use on the coins of ornaments—usually known as mint-marks. There is no other series that I know where the designers of the coins have been so lavish with their ornaments—sometimes three and four on a single coin. It is reasonable to think that some special meaning must be attached to them, and the problem is to discover that meaning.

In 1907 I wrote (*I. M. C.*, vol. ii, p. 245), "the evidence of the coins described in this catalogue would indicate a reference to a particular period of issue rather than to a particular mint". This is fully borne out by the more complete series of coins now available for examination. Tables are attached showing for the reigns of Ghiyāṣ Shāh, Nāṣir Shāh, and Maḥmūd Shāh II the

ornaments employed in each year on the gold, silver, and copper coins to which I have had access. There seems little doubt, from an examination of these tables, that the ornaments were personal or privy marks of the official who was at the time controlling the Māndū mint, and of the *ṣarrāf* to whom was given the contract for the design and striking of the coins. We get a particular ornament continuing on gold, silver, and copper, during a year or series of years and then giving place to a different ornament, which likewise may continue for a year or two or longer, to be replaced in its turn by a third and so on. Indeed, it is possible by these ornaments to say of any particular coin, from which the date has been lost in the striking, that it must have been issued within a particular period, limited perhaps to even one or two years. The use of these ornaments persists to the end of the series and in some cases, such as the copper issues of Ḳādir Shāh and Bāz Bahādur, in the name of their suzerains, their appearance on the coins is by itself a very strong reason for looking to Mālwa as the origin of these issues. It is to be noted that the ornaments fall into two classes, (a) principal, (b) subsidiary. Most of the first class occupy a particular position on the coin consistently—with occasional exceptions—throughout the reign or for an appreciable part of it. For instance on the square gold and silver issues of Ghiyās Shāh the sole or principal ornament will be found always above the الوائى of the obverse inscription: on his copper *fulus* it is placed above the lower ن on the reverse, while on most of Nāsir Shāh's and Maḥmūd Shāh's coins it is above the lower ب on the reverse. In some cases—e.g. on Ghiyās Shāh's copper between

892 and 895 H., and on many of Maḥmūd Shāh II's coins there is a second ornament, which appears unchanged in the same position for a period of years. This also may be included in the "principal" class.

It is suggested that these principal ornaments represent the personal mark of the mint-master liable to be changed from time to time, i.e. a mint-mark, while the subsidiary ornaments were used as privy marks to distinguish particular issues. Thus in one year we may get a single "principal" ornament with different "subsidiary" ones. But in some years (e.g. of Ghiyās Shāh, 888 to 890 H.) we find several different "principal" ornaments occurring in the same year, and these would also appear to mark different issues. In certain periods during the reign of Maḥmūd Shāh II there is a regular riot of ornaments on the coins—as many as four on one coin. This is most marked in the years 923 to 925 H. What the explanation of this may be I am unable to conjecture. This, however, may be noted, that this feature coincides with a period of distraction in the State, Maḥmūd having fled to the protection of the Gujarāt Sultān Muẓaffar, who in 924 H. invaded Mālwa and took the capital, Māndū, while in the following year Maḥmūd was defeated and captured by Rānā Sangrāma of Chitor. Some confusion in the currency administration is therefore not perhaps to be wondered at.

While it may be confidently asserted that the large mass of the coinage of the Mālwa Sultāns issued from the capital, i.e. the Māndū mint, the existence of other mints, at any rate during particular periods, cannot be altogether ruled out. In certain years we

find two parallel series of copper coins bearing different "principal" ornaments, and differing, too, either in type or appearance. The last few years of Ghiyās Shāh may be quoted as an example—the two "principal" mint-marks being M.M. 5 and 17. It seems reasonable to assume that the two series issued from different mints. The coin struck by Ibrāhīm Lodī (No. 88) may perhaps afford a clue to the mint which used M.M. 17.

Apart, however, from the special reasons for their occurrence on the coins, the symbols have an interest of their own, inasmuch as they can be traced back to the earliest ages of Indian civilization. Many of them are similar to those observed on the seals unearthed at Mohenjo Daro of the Indus valley and Ur in Mesopotamia, and some few are found stamped on the "punch-marked" coins—India's earliest coinage. It is indeed conjectured by Dr. Pran Nath (*Journal of the Royal Asiatic Society*, July, 1931, p. 671.—"The Script of the Indus Valley Seals") that they are but a combination in pictorial form of actual characters of an ancient Indian script which he would call Proto-Brāhmī. In the lapse of time the linguistic interpretation of the symbols was lost, but the forms remained as auspicious signs handed down from generation to generation; and, strangely enough, after a long period of disuse we find what are essentially Hindu symbols figuring conspicuously on a Muhammadan coinage—employed perhaps by Hindu mint officials without any thought of their original meaning.

Metrology. Hoshang Shāh, the founder of the Khaljī dynasties of Mālwa, obviously adopted the

standards of the Dehli Sultāns as they were before Muḥammad Tughlaḳ began tampering with the coinage. Indeed, some of the coins of 'Alā al-dīn Maḥmūd I bear a very striking resemblance in design and inscription as well as weight to those of 'Alā al-dīn Muḥammad II of Dehli—who, be it noted, was himself a Khaljī. What these standards were has been discussed by Mr. Nevill and myself in a paper entitled "Some observations on the Metrology of the Early Sultāns of Dehli", printed in the *Journal of the Asiatic Society of Bengal*, 1924 (*Numismatic Supplement*, XXXVIII). It may be advanced with some confidence that the *tanka*, whether of gold or silver, consisted of 96 *ratīs* and not of 100 *ratīs* as suggested by Edward Thomas (*Chronicles of the Pathān Kings of Delhi*). An extensive study over a larger field than was available to Thomas has shown that his conclusions cannot be sustained, and as these have till recently held the field unquestioned it is necessary to revise some of the later observations on Mālwa standards, such as those made by Dr. White-King (*Num. Chron.*, 4th Series, vol. iv, 1904, p. 63) and myself (*I. M. C.*, vol. ii, p. 244). While the weight of the official *ratī* cannot be determined with absolute certainty Mr. Nevill and I held in the paper above quoted that for practical purposes a *ratī* weight of 1.8 grains was both most probable and convenient. Since then Dr. Pran Nath in "A Study in the Economic Condition of Ancient India"—*Royal Asiatic Society Monographs*, vol. xx, Chapter III,—has independently arrived at the same conclusion. This rate fits in very well with the ascertained weights of the various coins in both the Dehli and Mālwa series. Thus Dr. White-King's diffi-

culty over the seemingly inexplicable weight of 64 *ratīs* for a silver coin finds a ready solution if the *tanka* is composed of 96 *ratīs*. The division of the Dehlī *tanka* into thirds, sixths, and twelfths as well as into halves, quarters, and eighths is well established, and in itself affords a strong presumption that the 96-*ratī* standard, which Bābur found in the tenth century (Hijrī), existed in the seventh and eighth. A 96-*ratī tanka* with a *ratī* of 1.8 grains means a *tanka* of 172.8 grains. The general run of the Mālwa gold and silver *tankas* is under 170 grains, as one would expect, making allowances for wear and tear. The highest coin-weight in gold, so far as I know, is 172 grains (No. 64 Maḥmūd II—923 H.), for the coin of 207 grains of Ghiyās Shāh to which Dr. White-King refers is admittedly not genuine. Similarly, half-*tankas* in silver range from 84 grains downwards (the unique gold half-*tanka*—No. 32, weighs 80.5), while quarter-*tankas* and eighths of a *tanka* are found weighing up to 43 and 20.8 grains maxima—the entry (No. 36) in Dr. White-King's list of a coin of Ghiyās Shāh in the British Museum weighing 47 grains is a mistake.

It may be noted incidentally that the coins afford help in fixing the dates of the reigns of Hoshang Shāh and Muḥammad I. These are given by Dr. White-King and the *Cambridge History of India*—

	W.-K.	C. H. I.
<u>Hoshang Shāh</u>	808-836	808-838
<u>Muḥammad I</u>	836-839	838-839

It will be seen that coins are known of Hoshang Shāh of 838 H. and of Muḥammad I of 840 H. (Nos. 5 and 6).

Very few—not half a dozen—dated coins are known of Maḥmūd I's earliest years. Having usurped the throne, he was too much occupied in quelling disaffection and consolidating his power to interest himself in the coinage. But about 845 H. he broke fresh ground and started coining in billon. It is significant that about the same time (843 H.) billon coinage, which had been temporarily discontinued in Dehlī, was re-introduced by Muḥammad bin Farīd.

Maḥmūd's billon coins were issued in seven sizes:

Coins of size I weigh from 169.7 to 145.3 grains.

„	II	„	139.5 to 124	„
„	III	„	85.5 to 73	„
„	IV	„	64.5 to 57.8	„
„	V	„	53.0 to 45.0	„
„	VI	„	42.0 to 39.0	„
„	VII	„	32.5 to 32.3	„

Maḥmūd evidently based his billon coinage on that of Muḥammad IV bin Fīroz of Dehlī, who during his regency in 790 H. had reorganized the currency, increasing the weight of the billon *tankas* from 80 to 96 *ratīs*, still maintaining, however, 80-*ratī* billons as coins of lower value in the scale. Coins of the first size in the above table clearly correspond to these 96-*ratī* billon *tankas*, while those of the second size are the 80-*ratī* billons. The third size is the half of the first, and the fourth size half of the second, while the fifth represents the old 32-*ratī* piece or *ḡitāl* of Dehlī. Coins of the sixth and seventh sizes are quarters of the first and second respectively, to which they bear resemblance in their reverse inscriptions. Too much importance must not be attached to the

considerable variations in the weights of the individual pieces in a mixed metal token currency. The coins were not likely to be melted down, and it was unnecessary, therefore, to be accurate about weights, the main object being easy recognition by the public, through size and type, of the value of each denomination. At the present time many of the billon coins appear little better than copper; others still disclose their silver content. Homogeneity in metal content was evidently not aimed at, and would indeed have been exceedingly difficult, if not impossible, to obtain (*vide J. A. S. B. Num. Suppl.*, article 215, p. 22), but doubtless at the time of issue all the coins had a sufficiently silvery appearance. The billon coinage was maintained by Maḥmūd till the close of his reign and must have constituted his main currency, but there is evidence that in 870 H. (or 869 H.), some gold *tankas* were struck, and a few small silver pieces of quarter-*tanka* weight (No. 11) are also known of the closing year of Maḥmūd's reign (873 H.). These latter may have been special pieces in the nature of *niṣār* or *largesse* money. They bear on their obverses الله اكبريا "To Allāh (belongs) the greatness" (cf. *Ḳor'ān*, sūra xlv. 6). The solitary eighth of a *tanka* (No. 11A) is probably of the same period.

Maḥmūd's copper coins are *fulūs* of the usual Dehli weight, 40 *ratīs* or 72 grains), with double *fulūs* and half- and quarter-*fulūs*. There is also a type (No. 25), coins of which vary in weight from 53 to 47 grains—presumably 32-*ratī* pieces, five of which would have gone to two double *fulūs*.

Between the years 862 and 868 H. Maḥmūd seems to have conferred on his son Ghiyās Shāh the privilege

of striking coin. As Dr. White-King says, "Maḥmūd being an usurper was doubtless anxious to secure his son's peaceful accession to the throne, and adopted this method of publicly proclaiming his successor." He was moreover engaged at the time in a protracted campaign, and a regency was therefore desirable. On the coins then issued by him, Ghiyās Shāh calls himself "Walī 'Ahd", i.e. Heir Apparent. Three gold *tankas* (No. 26) and some copper *fulūs* and double *fulūs* (Nos. 37-9) are known. The former, incidentally, were the first gold coins to be struck in Maḥmūd's reign.

Ghiyās Shāh's own first gold *tankas* (Nos. 27-9) are very similar in type to the heir-apparent coins, but on the coin of 874 (No. 27), the legend is so arranged as to separate the two words "ولي," and "عهد", and thus alter their sense, while in Nos. 28 and 29 the ولي is dropped. In 880 H. we get the first square gold *tankas* which are characteristic of Mālwa, but in silver a square half-*tanka* was struck as early as 878 H. (B.M.). In 885 H. the arrangement of the inscription is slightly changed (No. 30 A), the British Museum having a unique coin of that year with legends enclosed in a double-lined square. The latter disappears in 886 H. (cf. No. 34 A) and the type remains constant for the rest of the reign. Only a solitary half gold *tanka* (No. 32) is known.

In silver Ghiyās Shāh seems to have struck no full *tankas* of 96 *ratīs*, the silver currency mainly consisting of 48-*ratī* pieces. The reason for the elimination of full silver *tankas* in favour of coins of half-*tanka* weight as the principal silver coin is not clear. It is, however, to be noted that in the neighbouring province of

Gujarāt, with whose affairs those of Mālwā were much intermingled, similar phenomena occur in the silver currency. The full *tanka* of Dehlī type is only known by very few examples prior to the accession of Maḥmūd I in 863 H. That monarch, like his namesake of Mālwā, relied mainly on billon in his early years, and though later in his long reign he started silver currency it consisted in the main of half-weight coins. But, judging by known coin dates, the initiative in this half-weight silver coinage seems to have been taken by Ghiyās Shāh, and his example followed in Gujarāt.

A very few small silver coins of 24 and 12 *ratīs* are also known of this reign. These have the Mālwā legend, "To Allah (belongs) the greatness", and may, as suggested above, have been coined more for purposes of *largesse* than currency.

The standard copper coin was a *fulūs* of 80 *ratīs* or 144 grains, the earliest known of which is dated 877 (B.M.). Halves and quarters of this were also in common use. In 887 H. Ghiyās Shāh issued a double *fulūs* of 160 *ratīs*, and two specimens of this weight are also recorded of 889 H. In 905 H., the last year of his reign, the weight of the standard *fulūs* was advanced to 100 *ratīs*, the half and quarter following suit; the result possibly of a cheapening of copper in relation to gold and silver. Other coins of unusual weight are Nos. 41 A (119 grs.), 49 (54 grs.), 49 A (51.5 grs.), and 50 (48 grs.). The last three are presumably intended for 32-*ratī* pieces.

Nāṣir Shāh continued the square issues in all metals with only two recorded exceptions (Nos. 52 A and 56). The first of these is one of the most remarkable coins of

the series. It is a gold *tanka* of lozenge shape with foliated sides, the inscriptions reading from the top of the lozenge to the bottom instead of horizontally as in the *mihrābī* coins of Akbar. This coin belongs to a Lucknow *ṣarrāf*. It is dated 913 H., the year, incidentally, in which a change was made in the silver coinage.

The gold *tanka* was kept at 96 *ratīs*, and the principal silver coin at 48 *ratīs*. But in 913 H. the latter was superseded by a 96-*ratī tanka* (No. 54). In the same year a second design was adopted (No. 55) which subsisted to the close of the reign. Only a few 24-*ratī* and but two 12-*ratī* coins (Nos. 56-7) are known.

Nāṣir Shāh's earliest copper *fulūs*—those of 906 H.—carried on the 100-*ratī* weight introduced in 905 H. by Ghiyās Shāh. The experiment, however, cannot have proved a successful adjustment of values, for in 907 H. Nāṣir Shāh reverted to a lower standard (96 *ratīs*) which remained in force for the rest of the reign.¹ But even this was an advance on the normal pre-905 H. standard of 80 *ratīs*, so we may perhaps assume that there had been a fall in the value of copper, though not to the extent allowed for in 905 H.

In 914 and 915 H. appeared a second type of *fulūs* (No. 59), with a different principal mint-mark, reverting to the 80-*ratī* standard—possibly a temporary issue from a provincial mint, for the coinage of the capital continued simultaneously without change in either design or weight.

It is to be noticed that both *fulūs* and half-*fulūs*

¹ The British Museum has a coin of 909 H. of the abnormal weight of 195 grains.

were issued in Nāṣir Shāh's name in 917 H. At the same time a 24-*ratī* silver piece of his successor Maḥmūd II is dated 916 H. The latter's accession has usually been placed in 916 H.,² and the explanation of the 917 coins may be that Maḥmūd was not formally raised to the throne till 2 May 1511—the year 917 beginning on 31 March 1511. Thus coins issued during the first month of 917 would bear Nāṣir Shāh's name. Maḥmūd's square 24-*ratī* piece of 916 H. may have been specially struck, and used as *largesse* at his coronation, with a view to affirming his right to the throne from the date of his father's death.

Maḥmūd II's gold *tankas* are scarce, particularly those of later issue on which his *kunya* is changed from *ابو الفتح* to *ابو المظفر* (Nos. 65-6). They conform to the normal 96-*ratī* standard. In silver, for the first three years of his reign, the currency consisted of the usual square 48-*ratī* coins, apart from the 24-*ratī* *niṣār* (?) with the *الله اكبر* legend, of which not half a dozen are known. But in 922 H. Maḥmūd re-introduced the 96-*ratī* silver *tanka* (No. 68), with its half (No. 70), and quarter (No. 70A). After 924 H. and till, at any rate, 930 H. yet another form of "*tanka*" was issued (No. 69A), these weighing from 107 to 114 grains, i.e. two-thirds of the full *tanka*. It is significant that these coins approximate in weight to the Gujarāt silver issues of the same period, and we know that at this time Maḥmūd was largely dependent on Muẓaffar of Gujarāt for the stability of his kingdom. It is possible, therefore, that the Mālwa silver currency was deliber-

² Thomas, *Chron.*, p. 366; W.-K., p. 25; C.H.I., iii, p. 712.

ately assimilated to that of Gujarāt. No gold or silver coins are known to me of later date than 930 H.

Maḥmūd's early copper currency indicates that, as at the close of Nāṣir Shāh's reign, two mints were issuing coins. Those, too, struck at the capital were, as in the case of Nāṣir Shāh, of higher weight than the others. The former vary from 150 to 154 grains in 917 and 918 H., but the weight was reduced in 919 H., and again still further in 921 H., after which the coins vary roughly from 135 to 120 grains. *Fulūs* of the second mint start with weights round about 135 grains, and fall slightly in later years. But, in spite of the irregular and frequently low weights after 918, it seems probable that it was still nominally the popular 80-*ratī* standard which the mint had in view. The comparative uniformity in their size and type was, with the official *imprimatur*, doubtless sufficient to secure that in the ordinary dealing of the bazaar a fixed number of these *fulūs* exchanged for the silver *tanka*. In fact, by this depreciation, copper coins were assuming a token value. In the Dehlī currency on which Mālwa standards were based, the silver *tanka* was worth 192 of the 40-*ratī fulūs*, four being equivalent to a "jitāl". In Malwā, therefore, 96 of the large *fulūs* would have gone to the silver *tanka*.

Muḥammad II, who was a rival of his brother Maḥmūd to the Mālwa throne, struck coins in 917-18 H. and again in 921 H. None of his gold *tankas* have come to light, and indeed, Muḥammad's known coins are limited to a unique silver half-*tanka* recently added to the British Museum collection and a few coppers. It is interesting to observe that the *fulūs* correspond in weight to those of Maḥmūd, that of

917 H. (No. 84) weighing 154 grains, while that of 921 falls to 132 grains.

Coin No. 88 is of outstanding interest. It was struck by Ibrāhīm Lodī of Dehlī, but its shape and type show that it was intended for currency in Mālwā. On Muḥammad II's death, Ibrāhīm Lodī obtained possession of the person of his heir Aḥmad Shāh and placed a dependent of his own in charge of Chanderī (Thomas, *Chron.*, p. 377 and W.-K., p. 28). Two specimens only are known—the other, which belonged to Col. Guthrie, is now in Berlin. They are 64-*ratī* pieces, a denomination familiar in the Dehlī currency. So also is the unique coin (No. 89) struck for use in Mālwā by Bahādur Shāh of Gujārāt during his occupation of that country between 937 and 941 H.

After Bahādur Shāh's death the Gujārāt throne passed to his son Maḥmūd, and to him Qādir Shāh, who took the opportunity of Humāyūn's forces leaving Mālwā in 943 H. to seize the government, owed nominal allegiance. This is shown in the rare coins Nos. 90 to 92, which are copper *fulās*, corresponding in weight to those of the last Khaljī, struck by Qādir Shāh in Maḥmūd's name. The latter is stated to have granted Qādir Shāh the right to strike coins, but none are known in his own name. The genealogy given on these coins is peculiar, Maḥmūd being called either the son of Laṭīf or Bahādur. As a matter of fact, though he succeeded Bahādur, he was the son of Laṭīf, Bahādur's nephew.

From 949 to 962 Mālwā was a dependency of the Sūrī sovereigns of Dehlī with Shujā' Khān, 'Īsā Khān, and Bāz Bahādur acting as governors. The latter declared his independence in 963 H. To his period

of governorship must be assigned the coins Nos. 93 to 97 A—round and square coins of almost identical type. Most of them correspond in weight to the coins of Maḥmūd II's early years, but there are some 64-*ratī* pieces also.

Finally, there are a few coins—64-*ratī* pieces—with a similar reverse design but struck in Bāz Bahādur's own name and dated 965. With these the coinages of the Mālwā kingdom closes. Akbar conquered the country in 968 H. and Mālwā became a Mughal province.

Metallurgy.

By the courtesy of the Keeper of the Coins in the British Museum and the Staff of the Museum Laboratory, the silver contents of a number of the silver and billon coins of the series have been tested by the specific gravity test. The result is shown in the tables (App. C) appended to this paper. While not capable of yielding exact data, this test is, as a rough-and-ready method, sufficient perhaps for practical purposes. At any rate no other can be so generally employed for Mālwā silver and billon until the coins become plentiful enough for duplicates to be spared for chemical analysis.

It would seem that the silver used for coinage was seldom, if ever, of the purity one is accustomed to meet with in the pre-Muḥammad Tughlaq coins of the Dehli series from which the weight standards were derived. The silver coins of the first king Hoshang Shāh (a *tanka* and half-*tanka*) give a return of 50 per cent. and 66 per cent. of silver respectively, and a similarly low percentage is to be found in the coins of the latest king Maḥmūd II. In between, several

attempts seem to have been made to adopt a pure standard. For instance, an early *tanka* of Maḥmūd I shows 83 per cent. of silver and Ghiyāṣ Shāh's small *tankas* were of a similar standard of purity. Nāṣir Shāh, when he re-introduced the larger *tanka* in 913 H., increased also the silver contents.—No. 54, a unique coin, giving a return of 90 per cent. silver. But in the issue which followed in the same year and persisted till the end of the reign there was a reversion to the lower standard. Only one coin out of those tested can be regarded as pure silver—a little eighth of a *tanka* of Ghiyāṣ Shāh (No. 36 *bis*). It may indeed be said generally, that it is in the smaller silver pieces of the series that one finds the greatest approximation to purity, which is, perhaps, to be expected if they were mostly intended for *largesse*.

My acknowledgements for help in the preparation of this paper are due to the officers of the British Museum Department of Coins and Medals, and particularly, in abundant measure, to its Keeper, Mr. John Allan, on whose time constant encroachments had reluctantly to be made. I have also to thank Mr. Philip Thorburn for generous assistance. Sir Richard Burn kindly sent me his coins for examination, and Rai Sahib Babu Prayag Dayal, Curator of the Lucknow Museum, was good enough to prepare for me a manuscript list of the Mālwa coins in the Lucknow Museum.

The greater part of my collection has now passed into the keeping of the British Museum; the remainder is in the Provincial Museum, Lucknow.

CATALOGUE OF COINS OF MALWA.

HOSHANG SHĀH.

A.H. 808-38 = A.D. 1405-35.

- | | | |
|----|--|-------------------------|
| 1. | <i>Obv.</i> | <i>Rev.</i> |
| | In double square with annulets in segments | In circle |
| | السلطان | ابو المجاهد |
| | الاعظم حسام | هوشنگشاه |
| | الدنيا والدين | السلطان |
| | | Margin |
| | | [لا اله الا الله ومحمد] |
| | | رسول الله ٨٣٨ |
| | A. A.H. 838. Wt. 109.7 (B.M.). [Pl. I.] | |

- | | | |
|----|---|-------------|
| 2. | <i>Obv.</i> | <i>Rev.</i> |
| | السلطان | ابو المجاهد |
| | الاعظم حسام | هوشنگشاه |
| | الدنيا والدين | السلطان |
| | | ٨٣٦ |
| | A. A.H. 836. Wt. 159.6 (B.M.). [Pl. I.] | |
| | A.H. 837 (B.M.). Wt. 147.5. | |

- | | | |
|----|--|---|
| 3. | <i>Obv.</i> | <i>Rev.</i> |
| | In double square, as on no. 1. | In circle, as on no. 1. |
| | | Marginal inscription illegible, but presumably as on no. 1. |
| | A. A.H. 838 (?). Wt. 78.0 (B.M.). [Pl. I.] | |

4.	<i>Obv.</i>	<i>Rev.</i>
	هوشنگشاه ³	دار الملك
	السلطان	شادياباد

Mint-marks: 38 or 27 or 61
or 11 or 62 or 63 or 64 to
left of هـ on most coins;
some without mint-marks.

Shadriabad. Æ. Wts. from 57.0 to 71.3; average of
nine pieces 64.0 grns.

MUHAMMAD SHĀH I.

A.H. 838-40 = A.D. 1435-6.

5.	<i>Obv.</i>	<i>Rev.</i>
	In double square with an- nulets in segments	In circle
	السلطان	محمد شاه بن
	الاعظم تاج	هوشنگشاه
	الدنيا والدين	السلطان
	ابو المجاهد	Margin
		ضرب هذه السكة بحضرت
		شادياباد . . .

N. A.H. 840 (from *I. M. Cat.*, no. 15). Wt. 168.5
(B.M.). [Pl. I.]

³ هـ is written هـ with mint-mark, or هـ when no mint-marks.

6. *Obv.**Rev.*

As on no 5.

As on no. 5, but in margin

ضرب هذه السكة بحضرت شادياباد
سنة اربعين وثمانماية

Shadrabad. *Æ.* A.H. 840. Wt. 169.0. [Pl. I.] Com-
pleted from B.M. (Wt. 161.7) specimen.

7. *Obv.**Rev.*

محمد شاه
السلطان

دار الملك
شادياباد

M. 86 over س.

Shadrabad. *Æ.* Wt. 66.7 (B.M.). [Pl. I.]

MAHMŪD SHĀH I.

A.H. 840-73 = A.D. 1436-68.

8. *Obv.**Rev.*

السلطان الاعظم
علا الدنيا والدين خليج
ابو المظفر محمود شاه
خلد الله خلافته

In circle

سكندر الثاني
يعين للخلافة ناصر
امير المومنين

Margin

ضرب هذه السكة بحضرت شادياباد
سنة سبعين وثمان مائة

Shadrabad. *Æ.* A.H. 869 (?). Wt. 169.7 (B.M.). A.H. 870.
Wt. 169.1. [Pl. I.] A.H. 871 (H.N.W.). Wt. 176.0.

8 A. *Obv.*

Rev.

In cinquefoil

In cinquefoil

السلطان الا
عظم ابو المظفر
علاء الدنيا

والدين محمد
شاه الخلیج خلد الله
۸۷۵ سلطانه

N. A.H. 870. Thomas, *Chron.*, p. 347.

9. *Obv.*

Rev.

As on no. 8.

As on no. 8

احد واربعين

Shādrabād. R. A.H. 841. Wt. 167.5 (B.M.). [Pl. I.].

10. *Obv.*

Rev.

As on no. 8.

As on no. 8.

Shadiabad (?). *R.* Wt. 81.0 (B.M.). [Pl. I.]

11. *Obv.*

Rev.

للّٰه الكبريا

محمود خلیج
شاہی

AR (sq.). A.H. 873. Wt. 42.4. [Pl. I.]

11 a. *Obr.*

Rev.

In circle

In circle with outer circles
of dots

علا الدنيا
والدين

محمود خلیج
شاہ

R. Wt. 19.0 (K. 14).

12.	<i>Obv.</i>	<i>Rev.</i>
	السلطان	محمود شاه خلیج
	ظل الله	بحضرت شادياباد
	في الارض	[?] في سنة ٨٤٨

"The shadow of Allāh on
the earth."

R. A.H. 848. Wt. 32.8. [Pl. I.]

13.	<i>Obv.</i>	<i>Rev.</i>
	السلطان	ابو المظفر
	للخليفة الكريم	خلج
	علا الدنيا	محمود شاه
	والدين ٨٤٨	

In corners

ضرب هذا السكه
بحضرت شادياباد

Shadīabād R (sq.). A.H. 848. Wt. 162.5. [Pl. I.]

All dates from A.H. 845 to A.H. 873 are known.

13 a.	<i>Obv.</i>	<i>Rev.</i>
In double square within circle, annulets in seg- ments	السلطان العادل علا الدنيا والدين ٨٦٥	In double square within circle, annulets in seg- ments ابو المظفر خلج محمود شاه

Bill. A.H. 864. Wt. 187.0. A.H. 865. Wt. 173.0. [Pl. I.]
A.H. 866. Wt. 188.0.

(To be continued).

MISCELLANEA.

COINS IN LINCOLN MUSEUM.

DURING a recent examination of coins in the Lincoln Museum—the vast majority of them found in or near Lincoln—it has become apparent that coins of the Claudian era are distinctly plentiful, and that among these are a number of “barbarian” imitations, very possibly of local make.

A list of these coins of Claudian date is added, and the more notable specimens of “barbarous” style are illustrated on **Pl. XII.**

CLAUDIUS

Obv. (except where otherwise stated) **TI·CLAVDIVS
CAESAR·AVG. P.M. TR. P. IMP.** Head, laureate.

Sestertius. *Obv.* head r. *Rev.* **SPES AVGVSTA S.C.**
Spes advancing l.

B.M.C. Empire I, p. 182, no. 124. C. 85 (1).

Dupondius. *Obv.* head l. *Rev.* **CERES AVGVSTA
S.C.** Ceres seated l. holding corn-ears and torch.

B.M.C. Empire I, p. 83, no. 186. C. 1 (9—including
five imitations—**Pl. XII. 1**).

As. *Obv.* head l. *Rev.* **CONSTANTIAE AVGVSTI
S.C.** Constantia, in military dress, standing l.,
raising r. hand and holding spear.

B.M.C. Empire I, p. 184, no. 140. C. 14 (3—including
one imitation—**Pl. XII. 2**).

As. *Obv.* head l. *Rev.* **LIBERTAS AVGVSTA S.C.**
Libertas standing front; head r., holding pileus and
extending l. hand.

B.M.C. Empire I, p. 185, no. 145, C. 47 (2—including
one imitation—**Pl. XII. 3**).

As. *Obv.* head l. *Rev.* S.C. Minerva, helmeted, advancing r., brandishing javelin and holding round shield.

B.M.C. Empire I, p. 185, no. 149. C. 84 (18—including ten imitations. Pl. XII. 4-6; one of the imitations is countermarked B behind the head).

As. *Obv.* head l. Legend ends P.P. *Rev.* S.C. As above.

B.M.C. Empire I, p. 192, no. 206. C. 84.

HYBRID.

As. *Obv.* of Agrippa. *Rev.* of Claudius, S.C. Minerva as above.

B.M.C. Empire I, p. 142, no. 161. C. 3 (1—imitation—Pl. XII. 7).

ANTONIA AND CLAUDIUS.

Dupondius. *Obv.* ANTONIA AVGVSTA, bust r. *Rev.* TI. CLAVDIVS CAESAR AVG. P. M. TR. P. IMP. S. C. Claudius standing l., holding simpulum.

B.M.C. Empire I, p. 188, no. 166. C. 6 (3—one imitation—Pl. XII. 8).

Apart from the "barbarous" imitations, the chief points of interest are the unpublished countermark B¹ (apparently ancient), and the muling of a reverse of Claudius, with an obverse of Agrippa. The As of Agrippa has been variously attributed to the reign of Tiberius (late), Caligula, and Claudius. Perhaps the first year of Caligula is the most probable date; but, in our hybrid, we have evidence at least of the continued popularity of the coin into the reign of Claudius.²

We are much indebted to Mr. Arthur Smith, Honorary Curator of the Lincoln Museum, for the opportunity to study and publish these coins.

H. M.

¹ *Numi Augg. Alexandrini*, pp. 131-2.

² Cp. B.M.C. Empire I, p. xxxii: mint-mark BON on coins of the reign of Claudius.

ALEXANDRIAN COINS OF ANTINOUS.

An unusually fine collection of these coins was sold at the R. G. Peckitt Sale (Sotheby, 21. 2. 29, lot 284); through the courtesy of Mr. B. A. Seaby it has been possible to examine them and to record a few interesting varieties and particularly fine portraits.

The coins all have obverse and reverse types of one general pattern:

Obv. Head of Antinous, r. or l. **ANTINOY HPWOC**

Rev. Antinous, on horse r., holding caduceus,

but are struck in three denominations, measuring about 1.25 in. (33 mm.), 1.15 in. (29 mm.), and 0.85 in. (23 mm.) respectively.

Of the largest denomination there were seven specimens. Four correspond to Dattari, no. 2081¹ (*obv.* head r., *rev.* **LIΘ**): three of these had variant of reverse, l. fore-leg of horse raised, the fourth had variant, r. fore-leg raised. [Pl. XII. 9.] Three were as Dattari, no. 2087 (*obv.* head l., *rev.* **LK**): in all these the l. fore-leg of the horse on reverse was raised.

Of the second denomination there were eight specimens. Four were as Dattari, no. 2083 (*obv.* head r., *rev.* **LIΘ**), all with the l. fore-leg of the horse raised on the reverse. Three were as Dattari, no. 2090 (*obv.* head l., *rev.* **LKA**)—one with variant of *rev.* cloak flying behind rider. One showed an unpublished variety of reverse, Antinous, holding caduceus, on horse galloping r., **LIΘ** (*obv.* bust r.). [Pl. XII. 11.]

The remaining three coins were of the third denomination, two as Dattari, no. 2084 (*obv.* bust r., *rev.* **LIΘ**)—Pl. XII. 10—l. fore-leg of horse on reverse raised—one as Dattari, no. 2091 (*obv.* bust l., *rev.* **LKA**).

One or two of the portraits were exceptionally fine in style and brilliantly struck.

H. M.

¹ Cp. B.M.C. Empire I, p. cxxxiii.

ROMAN COINS FROM NORFOLK.

THE following 18 coins, comprising, as far as I know, the whole of a hoard, came into my possession in the summer of 1931. I was told that they were dug up at Stiffkey, a small village on the north coast of Norfolk, but no details were forthcoming. Most of the coins are in good condition, and a few show traces of the silver wash. The following rulers were represented :—

Volusianus	.	.	.	.	.	.	1
Gallienus	.	.	.	.	.	.	1
Salonina	.	.	.	.	.	.	3
Saloninus	.	.	.	.	.	.	1
Postumus	.	.	.	.	.	.	7
Victorinus	.	.	.	.	.	.	5
							18

The following is a brief description of the coins :—

VOLUSIANUS.

1. *Obv.* IMP CAE C VIB VOLVSIANO AVG

Rev. CONCORDIA AVGG Star in field to right.
Cohen 20.

GALLIENUS.

2. *Obv.* GALLIENVS AVG

Rev. VICTORIA AVG III T in field to left. Cohen
1118.

SALONINA.

3. *Obv.* SALONINA AVG

Rev. AVG IN PACE In exergue MS. Cohen 17.

4. *Obv.* As before.

Rev. FELICITAS PVB(LICA). Cohen 50.

5. *Obv.* As before.

Rev. DEAE SEGETIAE Cohen 36.

SALONINUS.

6. *Obv.* SALON VALERIANVS (CAES).
Rev. PIETAS AVG Cohen 41.

POSTUMUS.

7. *Obv.* IMP C POSTVMVS P F AVG
Rev. HERC DEVSONIENSI Cohen 91.
8. *Obv.* As before.
Rev. MONETA AVG Cohen 199.
9. *Obv.* As before.
Rev. ORIENS AVG P ? C in field. Cohen 218.
10. *Obv.* As before.
Rev. PAX AVG P and ? Star in field. Cohen 215.
11. *Obv.* IMP C POSTVMVS · P · F · AVG
Rev. PAX AVG No marks in field. Cohen 215.
12. *Obv.* IMP C POSTVMVS P F AVG
Rev. VICTORIA AVG Cohen 377.
13. *Obv.* As before.
Rev. VIRTVTI AVGVSTI Cohen 452.

VICTORINUS.

14. *Obv.* IMP C VICTORINVS P F AVG
Rev. INVICTVS Star in field. Cohen 46.
15. *Obv.* As before.
Rev. INVICTVS ? Star in field. Cohen 46.
16. *Obv.* IMP C PIAV VICTORINVS (P F) AVG
Rev. PAX AVG V and Star in field. Cohen 83.
17. *Obv.* IMP C VICTORINVS P F AVG
Rev. SALVS AVG Cohen 112.
18. *Obv.* As before.
Rev. SALVS AVG Cohen 118.

A LATE HOARD OF Æ3 AND Æ4 FROM EGYPT.

By the kindness of Prof. Sir Flinders Petrie I have been permitted to examine this hoard of about 1,300 coins. It is a good illustration of the chaotic state of the Egyptian currency of the fifth century A.D., described by Dr. Milne in the *Numismatic Chronicle* for 1926.

Apart from the usual "outlier"—in this case a coin of Tyre of the late first century A.D.—the earliest coins are a few survivors of the *Gloria exercitus* and *Victoriae dd. Augg. g. nn.* issues. More than half of the hoard is made up of the succeeding Æ3 types:—*Spes reipublice* (153 coins), *Fel. temp. reparatio* "spearing fallen horseman" (117), *Gloria Romanorum* (57), and *Securitas reipublicae* (361). The bulk of the remainder are the common Æ4 Theodosian types, chiefly *Salus reipublicae* (309) and *Vot. X mult. XX* (56). Of coins which could be dated after A.D. 395 there are comparatively few:—Æ3 *Virtus exerciti* "Victory crowning Emperor" (7, of which only one seems legitimate), Æ4 *Concordia Aug.* (and *Augg.*) "Cross in wreath" (50) and lastly one each of *Gloria Romanorum* "Two Emperors (a) with spears and shields, (b) holding globe between them". As the latter of these seems to be used by Honorius and Theodosius II only and never by Arcadius, the hoard can be dated as not earlier than A.D. 408, the date of the the latter's death.

The Æ3 coins that are evidently legitimate are comparatively few, and are worn and broken. The others are copies, struck on flans of Æ4 or only slightly larger module; their average weight is about two-thirds of the normal. The use of lead alloy is much in evidence in this hoard. The metal of the coins in general is unusually soft, while twelve are of pure lead. These range from 9 to 14 mm. in diameter; only one has a recognizable type—a Victory. In the contemporary "Hawara 6" hoard, Dr. Milne found only three of lead out of a total of 3,182. But the most striking characteristic of the present hoard is the appearance of distinct patches of lead on the surface of coins with types differing widely in time—from Constantius II to Theodosius I—and in nominal place of issue. About fifty coins show this peculiarity, which points to a common origin and the indiscriminate copying at one and the same time of obsolete as well as of current types. That types such as those of the Æ3 mentioned above, all widely struck and long current, should still be perpetuated by the copier even when supplanted in the legitimate mints, would

not be surprising. It is, however, surprising to find in this small hoard seven examples, two with the characteristic pocket of lead, of the rare type "Emperor carrying trophy and dragging captive r." They are all obviously copies. None shows a mint-mark or the Emperor's name. But the type must be that of Julian (C. 82) with *rev.* legend *Virtus Romanor.* On one example - - - *t* - - *Ro* - - - is legible. Two *Vot. XV. mult. XX* $\overline{\text{SMRP}}$ with flan adequate for the reverse but allowing no trace of *obv.* legend are from the same die; which fact by itself would suggest that they must be copies. That they are little worn and are found together in the same small hoard proves that they must be recent. Yet the type—in $\overline{\text{AE}}$ —dates back to Gratian at least. With very few exceptions the coins, though poor and flat in workmanship, are not at all barbarous. The legends, so far as they are visible, are nearly always correct.

Dr. Milne's view that coins at the time when this and similar hoards represented the currency of Egypt were merely tokens of equal value seems alone to fit the facts. However, the distinction between the two denominations $\overline{\text{AE}} 3$ and $\overline{\text{AE}} 4$ could hardly have been lost when the lead-pitted forgeries, mainly $\overline{\text{AE}} 3$ on small flans but also $\overline{\text{AE}} 4$ *Salus reipublicae*, were struck c. A.D. 395. At this date $\overline{\text{AE}} 3$ was still a recognized denomination and even the reduced copies must have been intended to pass as distinct from $\overline{\text{AE}} 4$, which average much less in weight. It was probably such degraded $\overline{\text{AE}} 3$ which drove out the two last true $\overline{\text{AE}} 3$ types, *Gloria Romanorum*, Emperor on horseback, and *Virtus exerciti*, which either do not occur in petty hoards or only in $\overline{\text{AE}} 4$ module. By the time this hoard was deposited, it would seem that the distinction was lost. Henceforth the current $\overline{\text{AE}}$ will be so small that any piece of stamped base metal can be equated with it. The single half of a coin, filed across the middle and neatly broken, occurs in the present hoard to support this conclusion.

J. W. E. P.

AN EASTERN HOARD OF LATE $\overline{\text{AE}}$.

A HOARD of about 500 $\overline{\text{AE}} 3$ and $\overline{\text{AE}} 4$ from Caiffa in Syria has recently come into the possession of Mr. T. W. Armitage, who has kindly supplied me with materials for this note. The single coin of Honorius (*Salus reipublicae*) dates the hoard to the closing years of the fourth century A.D. It thus

forms an earlier link in the chain of evidence which Dr. Milne has given us (*Num. Chron.*, 1926) for the currency used by petty traders in the East during the fifth century.

Apart from an outlying coin of Nabataea (Malichus I, A.D. 40-71) and an Æ 2 of Arcadius, which from its appearance Mr. Armitage thinks cannot have formed part of the hoard, this consists almost entirely of the Theodosian Æ 4 current at the time of its deposition and the demonetized Æ 3 of the periods of Constantius II and Valentinian I. The Æ 4—about one-third of the total—are mainly of the *vota* and *Salus reipublicae* types and their distribution between mints and Emperors is much as we should expect, except for the total absence of Gratian. The mints represented are Antioch (50 coins), Alexandria (10), Nicomedeia (6), Heraclea (3), Cyzicus (8), Constantinople (8), and in the Western Empire

Thessalonica (1 : Arcadius *Gloria reipublica* [|]
TES), Siscia (1 : Theodosius *vot. V mult. X ASI[SC]*), Aquileia (2, one a rare *Victoria Auggg.* Single Victory type of Theodosius,

[|]
AQP), Rome (8). Of the *vota*, X-XX is by far the most numerous. It was evidently struck, not only in Gratian's reign for Valentinian II, but after Gratian's death for Theodosius; being found for both these Emperors from all Eastern mints. As Arcadius, like Gratian, has the type from only two or three mints, these *vota* when they occur on his coins are probably not his own.

The main interest of the hoard, however, lies in the problems suggested by the remaining coins. Two Æ 3 of Valentinian II *Urbs Roma* and *Concordia Auggg.* were in good condition. They were probably still current. Although in the West there had been one or two later issues of this denomination, in the East no further Æ 3 were struck before the *Gloria Romanorum* (Emperor on horseback) at the beginning of Honorius' reign. That this latter type should not appear in the present hoard is, perhaps, not surprising; but Dr. Milne's later hoards show a great scarcity of the current Æ 3, which seems to have played a very small part in the small tradesman's business dealings.

The other Æ 3 are mostly of the four types *Spes reipublice* (56 coins), *Fel. temp. reparatio* (fallen horseman type; 54), *Gloria Romanorum* (48), and *Securitas reipublicae* (104). With few exceptions these are of about the module of the current Æ 4 with which they are evidently equated. Some have obviously been clipped—a common treatment in late times of

early demonetized $\text{Æ} 2$ and $\text{Æ} 3$; some have the edges so well rounded that they give the impression of having originally been struck on $\text{Æ} 4$ flans, so that the mint-mark is as a rule lost. But such a practice in legitimate mints, from which most of these coins certainly come, would stultify the whole carefully devised system of mint-marks. A more conclusive argument is furnished by some $\text{Æ} 4$ coins of the *Securitas* type occurring in this hoard with the mint-marks **SMRT** and three of the **RPRIMA** series. We can feel sure that these were not struck at one and the same time in two distinct modules. The last issue in the West of the *Gloria Romanorum* in question (not accompanied by *Securitas reipublicae*) was at least ten years later than the issues mentioned above, yet from Aquileia I have coins of Valentinian II weighing 48 and 53 grs.—as much above the average as the “degraded” coins are below it.

Of course if we had only mutilated coins of Antioch or Alexandria with their uniform mint-marks and (occasionally) smaller-proportioned types it might be easy to be misled. But in the East the issue cannot long have outlived the accession of Gratian, whose coins with these types are rare, but show no falling-off in module.

I am convinced that if unmistakable instances of degradation are found they must be due to forgers or, if legitimate, to local and temporary conditions at the mint and are no evidence in themselves of an empty Treasury and a consequent policy of inflation.

J. W. E. P.

THE NOBOTTLE THEODOSIAN HOARD (CORRIGENDA)

A more recent examination of some coins from the late fourth-century Roman hoard found at Nobottle, Northants. (published in *Num. Chron.*, Fifth Series, Vol. IX, No. 39 (1930), pp. 275–281), shows that certain attributions were wrongly made. It seems, therefore, desirable to publish corrected tables where necessary. The other tables remain unaltered:—

TABLE II (PART)

<i>Analysis of Mint-Marks House of Theodosius I</i>	<i>Arles</i>	<i>Lyons</i>	<i>Treves</i>	<i>Aquileia</i>	<i>Rome</i>	<i>Siscia</i>	<i>Nicomedia</i>	<i>Thessalonica</i>	<i>Antioch</i>	<i>Nil</i>	<i>Total</i>
Valentinian II	14	5		3	5	1				17	45
Theodosius I	14	5	3	6	9		1	2		19	59
Arcadius	42	16	2	11	1				1	62	135
Honorius	11	3		4	10					41	69
Unassigned	26	5	7	1	26					170	235

TABLE III (PART)

'Victoria Auggg' type—Arles

	<i>OF I</i>	<i>OF II</i>	<i>OF III</i>
Valentinian II	8	--	—
Theodosius I	—	9	—
Arcadius	10	6	14
Honorius	—	—	5

'Salus Reipublicae' type—Rome

	<i>OF I</i>	<i>OF II</i>	<i>OF III</i>	<i>OF IV</i>	<i>OF V</i>
Valentinian II	—	2	—	—	—
Theodosius I	—	—	1	--	—
Arcadius	—	—	—	—	1
Honorius	3	—	2	1	—

INDEX.

A.

- Abdera, coin of, 68
 Acanthus, tetradrachm of, 66, 69
 Aegina, coins of, 70
 Agra, zodiacal coins of, 115-126
 Agrigentum, didrachm of magistrate Exakestos, 78
 Ahmadabad, zodiacal coins of, 111-113
 Ajmer, zodiacal coins of, 110-111
 Alexander III of Scotland, coins of, found at Durham, 227
 Alexandria, coins of Antinous of, 315
 ALLAN, JOHN :—
 Notice of Sir John Bucknill, *Coins of the Dutch East Indies*, 240-241
 Notice of *Preliminary Report upon Excavations at Tel Umar*, 244
 Notice of *Quarterly of the Department of Antiquities in Palestine*, I, nos. 1, 2, 241
 Notice of *Sylloge Nummorum Graecorum*, 248
 Anglo-Saxon coins, a find of, 133-135
 Anti-Jacobite medal of 1714-1715, 62-65
 Antinous, Alexandrian coins of, 315
 Antioch, tetradrachms of, found at Nineveh, 160-161
 Athens, coin of, 70

B.

- Bahādur Shah of Gujarāt, strikes coins for Mālwa, 305
 Basiliscus, semis of, 151
 Benha el-Asi find, 66-71
 Berwick-on-Tweed under Edward I-III, 28-52
 BLUNT, C. E. :—
 The Mint of Berwick-on-Tweed under Edward I-III, 28-52
 Roman coins from Norfolk, 316-317

- Boehrer, E., notice of his *Münzen von Syrakus*, 242-248
 Borth (Cardiganshire), a find of nobles at, 53-61
 BROOKE, GEORGE C. :—
 A find of nobles at Borth (Cardiganshire), 53-61
 Two unpublished English medals, 62-65
 An Anglo-Saxon find (temp. Edward the Elder—Æthelstan), 133-135
 Bucknill, Sir John, notice of his *Coins of the Dutch East Indies*, 240-241
 Byzantine coins, unpublished, 151-159

C.

- Caesarea (Cappadociae), silver didrachms of, found at Nineveh, 163-164
 Caiffa (Syria), late Roman coins found at, 319-321
 Camborne, Roman coins found at, 233-234
 Caracalla, coin of, relating to the Scottish campaign of Severus, 137-150
 Carbone, Lodovico, owned a portrait of Leonello d'Este by Pisanello, 195
 Catana, tetradrachm of, with graffito, 75
 Censorius, alleged coin of, 26
 Chalcis, coins of, 70
 Cirencester, seventeenth-century token of, 131
 Colchester, medieval mint of, 266-271
 Collegia opificum in Rome, 1-13
 Constantine V, semis of, 152-3
 Corinth, Roman coins found at, 229-233
 Crimissa, coin of, 37-38

D.

- David II, coins of, found at Durham, 227
 'Defalta Monetariorum', 261-290
 Delta (Benha el-Asl) find, 66-71
 Derby, seventeenth-century token of, 131
 Dies of Greek coins, life of, 171-175
 Durham, coins of Edward I-III found at, 201-228

E.

- East Grinstead, seventeenth-century token of, 132
 Edward I, silver standard for coinage of, 197-200; coins of Berwick-on-Tweed of, 34-39, 47-49; coins of, found at Durham, 209
 Edward II, coins of Berwick-on-Tweed of, 39-42, 50-51; coins of, found at Durham, 209
 Edward III, coins of Berwick-on-Tweed of, 42-45, 51-52; coins of, found at Durham, 210-227
 Elis, the coinage of, 171-180
 Eretria (?), tetradrachm of, 67
 Eryx, litra of, 76-77
 Exakestos, magistrate of Agrigentum, 78

F.

- Fathpur mint, zodiacal coins of, 126-127
 Finds of Coins:—
 Anglo-Saxon find (*temp.* Edward the Elder—Æthelstan), 133-135
 Benha el-Asl, *see* Delta
 Borth (Richard II-Henry VI gold), 53-61
 Camborne (Roman), 233-234
 Corinth (Roman), 229-233
 Delta (Greek), 66-71
 Durham (Edward I-III), 199-228
 Egypt (late Roman), 318-319
 Grovely Wood (Roman), 14-27
 Lochmaben (Edwards), 33
 Newminster (Edwards), 32
 Nobottle (Northants.), 321-322
 Norfolk, *see* Stiffkey
 Richborough (Roman), 14-27
 Segontium (Roman), 23
 Stiffkey (Roman), 316-317

- Syria (late Roman), 319-321
 Weymouth Bay (Roman), 14-27
 Forbes, James, on zodiacal coins, 98
 'Forth Bridge', a coin of Severus, 137-150

G.

GABRICI, ETTORRE:—

- Notes on Sicilian Numismatics, 73-90

- Gallatin, Albert, notice of his *Syracusan Dekadrachms of the Euainetos Type*, 245-246
 Gaucher II de Châtillon, coins of, found at Durham, 228
 Gela, diobols of, 86
 Gentil, Colonel, on zodiacal coins, 99
 Ghiyās Shah of Mālwa, coins of, 300-302
 Giesecke, W., notice of his *Das Ptolemäergeld*, 238-240
 Gigantomachia medal of 1660, 65
 Goodacre, H., notice of his *Handbook of the Coinage of the Byzantine Empire*, 72
 GOODACRE HUGH:—
 Notes on some rare Byzantine Coins, 151-159
 Gordian III, medallions of, 249-260
 Graffito on coin of Catana, 75
 Grovely Wood, Roman coins from, 14-27
 Guarino of Verona, the date of his poem to Pisanello, 184-185

H.

- Halaesa, coin of, 87
 Henry V, nobles of, found at Borth, 55-57
 Henry VI, nobles of, found at Borth, 57
 Herodian on Severus' Scottish campaign, 140
 HILL, GEORGE F.:—
 A hoard of coins from Nineveh, 160-170
 On some dates in the career of Pisanello, 181-196
 Himera, Pelops didrachm of, 74
 Hipana, coin of, 77
 Hoshang Shāh of Mālwa, coins of, 308-309

I.

- Imachara, coin of, 86
Ipswich and its moneyers, 272-274

J.

- Jahāngīr, zodiacal coins of, 91-130
John de Bourdon, Chamberlain of Berwick-on-Tweed, 42
John the Blind, coins of, found at Durham, 228
John I Vatatzes of Nicaea, bronze coin of, 157
John VII, coins of, 156
John III, of Brabant, coins of, found at Durham, 228
Justinian II, semis of, 151

K.

- Kādir Shāh, coinage of, for Mālwa, 305
Kashmir mint, zodiacal coins of, 127-128
Krimissa, *see* Crimissa

L.

- Lahore, zodiacal coins of, 128-130
LAWRENCE, L. A. :—
A silver standard of Edward I, 197-200
The Durham hoard of Edward I-III, 201-228
Leonello d'Este, Pisanello's portrait of, 195
Libyes, coins of the, 88-90
Lincoln, barbarous Roman coins found at, 318-314
London, unpublished seventeenth-century token of, 182

M.

- MABBOTT, THOMAS OLLIVE :—
Notes on some rare or unpublished seventeenth-century tokens, 181-183
Magor farm, *see* Camborne
Mahmūd I of Mālwa, coins of, 310-312
Mahmūd II of Mālwa, coins of, 303-304
Mālwa, the coinage of, 291-312
Martin, Claud, on zodiacal coins, 98-99

MATTINGLY, HAROLD :—

- Coins in Lincoln Museum, 313-314
Alexandrian coins of Antinous, 315
A late Roman hoard from Corinth, 229-233
Notice of W. Giesecke, *Das Ptolemäergeld*, 238-240
Notice of P. L. Strack, *Untersuchungen zur römischen Reichsprägung des zweiten Jahrhunderts*, Part I, 235-238
Notice of H. Goodacre, *Handbook of the Coinage of the Byzantine Empire*, 72
Notice of Sir George Macdonald, *Roman Britain 1914-1928*, 243-244
Mende, tetradrachms of, 67, 69
Michael I and Theophylactus, semis of, 155
MILNE, J. GRAFTON :—
The Coinage of the Eleians, 171-180
Mint-standard of Edward I, a, 197-200
Moor, Edward, on zodiacal coins, 96
Morgantina, hemilitron of, 75
Motya, coins of, 79-80
Muhammad I of Mālwa, coins of, 309-310
Muhammad II of Mālwa, coins of, 304-305
Myskelos, graffito of, on coin of Catana, 75
- N.
- Nāsir Shāh of Mālwa, coins of, 303-304
Neapolis Datenon, coin of, 69
NEWELL, E. T. :—
Additions to the Delta (Benha el-Asl) hoard, 66-68
Nicholas de Acton, mint official of Berwick-on-Tweed, 40
Nineveh, a hoard of Roman coins from, 160-170
Nobottle (Northants.), Roman coins from, 321-322
Noe, S. P., notice of his *Coinage of Metapontum* (Part II), 217-248
Norfolk, Roman coins from, *see* Stiffkey
Northampton and its moneyers, 287-289

Norwich and its moneyers, 263-264, 280-286

NOTICES OF BOOKS:—

Boehrer, Erich, *Die Münzen von Syrakus*, 242-243

Bucknill, Sir John, *Coins of the Dutch East Indies*, 240-241

Gallatin, A. *Syracusan Dekadrachms of the Euainetos Type*, 245-246

Giesecke, W., *Das Ptolemäergeld*, 288-240

Goodacre H., *A Handbook of the Coinage of the Byzantine Empire*, Part II, 72

Macdonald, Sir George, *Roman Britain 1914-1928*, 243-244

Noe, S. P., *The Coinage of Metapontum*, Part II, 247-248

Preliminary Report on Excavations at Tel Umar, 244

Quarterly of the Department of Antiquities in Palestine, 241

Regling, K., *Der griechische Goldschatz von Prinkipo*, 246-247

Strack, P. L. *Untersuchungen zur römischen Reichsprägung des zweiten Jahrhunderts*, Part I, 235-238

Sylloge Nummorum Graecorum, Vol. I, Part 1, 248

O.

OMAN, SIR CHARLES:—

The First Forth Bridge, A.D. 209, 186-150

O'NEIL, B. H. St. John:—

Coins found at Camborne Roman Villa, 233-234

The Nobottle Theodosian Hoard (Corrigenda), 321-322

Orescii, staters of, 67, 69

P.

Panormus, coins of, 78-79

Papius, L., symbols on coins of, 2-7

Parthian coins found at Nineveh, 164

PEARCE, J. W. E.:—

A late hoard of Roman Æ 3 and Æ 4 from Egypt, 318-319

An eastern hoard of Late Æ, 319-321

Phaselis, stater of, 68

Philip de Cambio, moneyer of Edward I, 197-200

PINK, KARL:—

The Bronze Medallions of Gordianus III, 249-260

Pipe-Roll entries relating to 'Defalta Monetariorum', 261-290

Pisanello, some dates in the career of, 181-196

Porpax (river) on coin of Eryx, 76-77

Punch-marks on Greek coins, 177-178

R.

Ralph de Sutton, mint official of Berwick-on-Tweed, 40

Regling, K., notice of his *Der griechische Goldschatz von Prinkipo*, 246-247

Restoration (1660) medal, a new variety of, 65

Richard II, nobles of, found at Borth, 54

Robert de Emeldon, Chamberlain of Berwick-on-Tweed, 43

ROBINSON, E. S. G.:—

Further notes on the Delta (Benha el-Asl) Hoard, 68-71

Notice of E. Boehrer, *Die Münzen von Syrakus*, 242-243

Notice of A. Gallatin, *Syracusan Dekadrachms of the Euainetos Type*, 245-246

Notice of K. Regling, *Der griechische Goldschatz von Prinkipo*, 246-247

Notice of S. P. Noe, *The Coinage of Metapontum*, Part II, 247-248

Roger de Goswyk, mint official of Berwick-on-Tweed, 39

Roger de Walkington, mint official of Berwick-on-Tweed, 40

Roman coins found at Corinth, 229-233; at Camborne, 233-234; at 'Nineveh', 160-170; at Lincoln, 313-314; at Nobottle (Northants.), 321-322; at Stiffkey (Norfolk), 316-317; in Egypt, 318-319; at Grovely wood, 14-27; at Weymouth Bay, 14-27; at Segontium, 23; in Syria, 319-321; late fourth-century Roman currency in Britain, 14-27.

Roscius, L., symbols on coins of, 8-13

S.

- SALISBURY, F. S. :—
 Late Fourth-Century Currency
 in Britain, 14-27
 Sarum, pewter seventeenth-centu-
 ry token of, 132
 Segontium, Roman coins found
 at, 23
 Selinus, countermarked litra of,
 78
 Septimius Severus, Scottish cam-
 paign of, 137-150
 Shādiabād, a mint of Mālwa, 308-
 312
 Siculo-Punic coins, 84-85
 Solus, didrachm of, of Selinuntine
 types, 80-82
 Standard of Edward I in the
 Mint, a, 197-200
 Sterlings, foreign, found at Dur-
 ham, 228
 Strack, P. L., notice of his *Unter-
 suchungen zur römischen Reich-
 sprägung des zweiten Jahrhunderts*,
 Part I, 235-238
 SYDENHAM, REV. E. A. :—
 Symbols on denarii of L. Papius
 and L. Roscius, 1-13
Sylloge Nummorum Graecorum, Vol.
 I, Part 1, 248
 Symbols on Roman denarii, 1-13

T.

- Tavernier, J. B., on zodiacal coins,
 93-95
 Terone, tetradrachm of, 67, 69
 Tetricus, date of barbarous coins
 of, 23
 Thasos, stater of, 66
 Theophylactus and Michael I,
 coin of, 155
 Thetford and its moneyers, 271-
 272
 Thomas de Burgh, chamberlain
 of Berwick-on-Tweed, 42

- Tokens, unpublished seventeenth-
 century, 131-133
 Trades-guilds in Rome, 3-13
 Treasure-Trove, note on, 135-136
 Tychoen, O. G., on zodiacal coins,
 95

U.

- Urdū mint, zodiacal coin of, 114

V.

- Valentia, Lord, on zodiacal coins,
 97-98
 Valeran II of Ligny, coins of,
 found at Durham, 228

W.

- WELLS, WILLIAM C. :—
 The Pipe Rolls and 'Defalta
 Monetarium', 261-290
 Weymouth Bay, Roman coins
 found at, 14-27
 WHITEHEAD, R. B. :—
 The Portrait Medals and Zodi-
 acal Coins of the Emperor
 Jahāngīr; Part II, The Zodi-
 acal Coins, 91-130
 William III of Hainault, coins
 of, found at Durham, 228
 Winchester and its moneyers,
 275
 WRIGHT, H. NELSON :—
 The Coinage of Mālwa, Part I,
 291-312

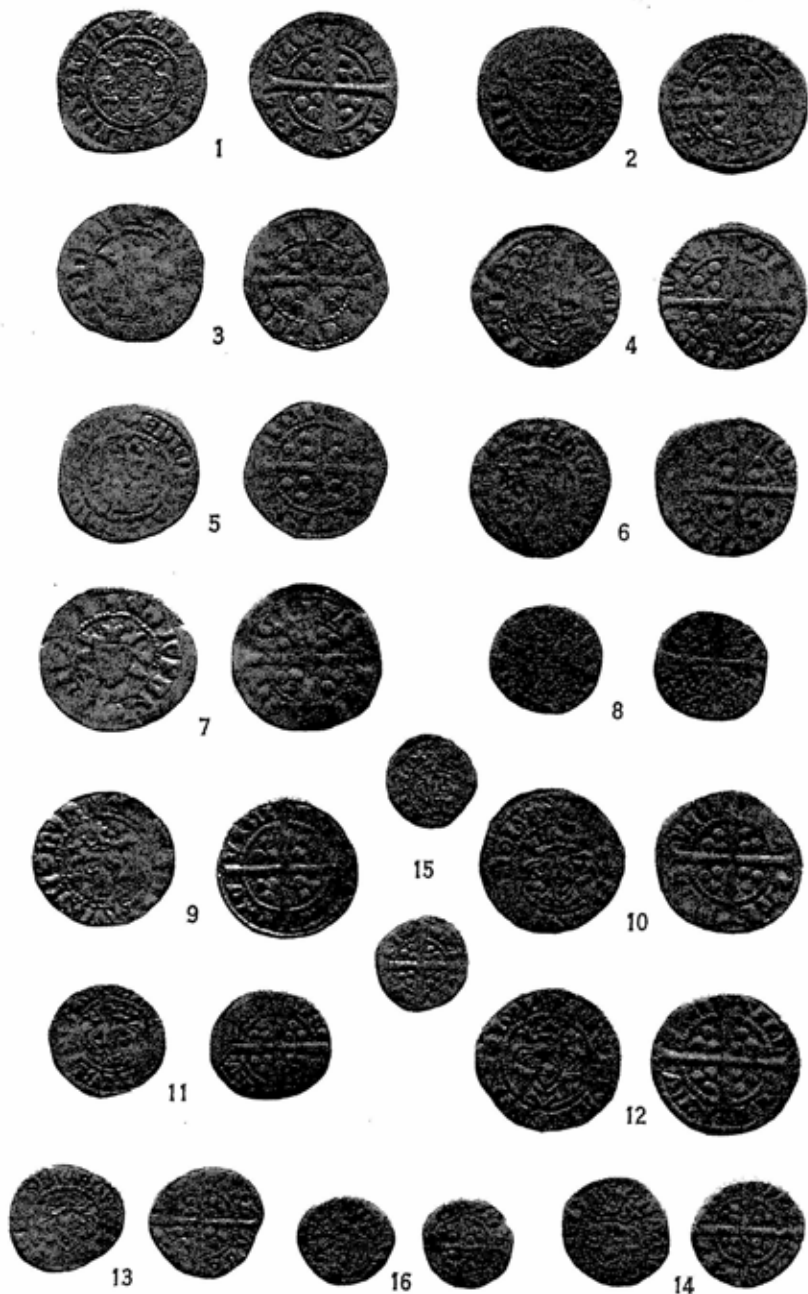
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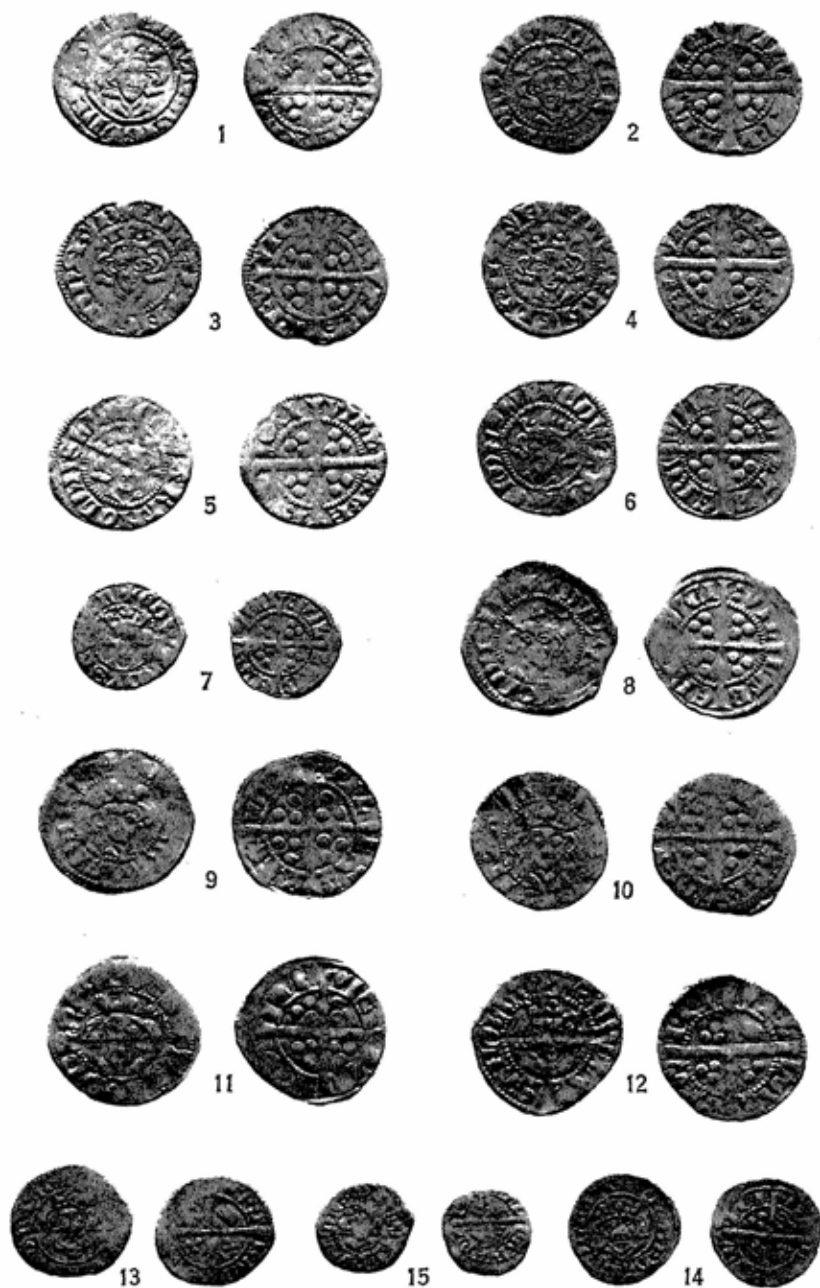
- York and its medieval moneyers,
 275-278; seventeenth-century
 token of, 132

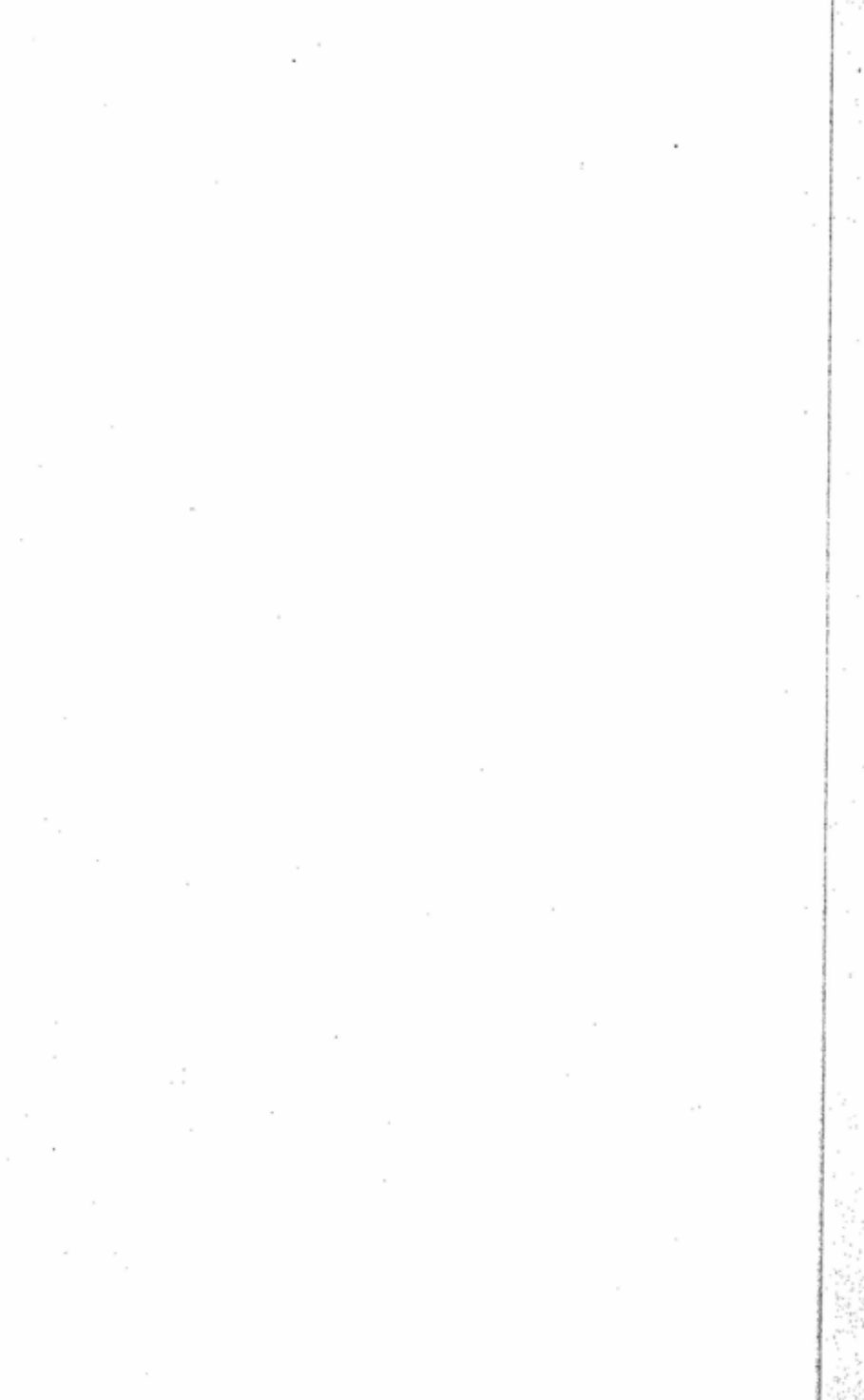
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- Zodiacal coins of Jahāngīr, 91-130











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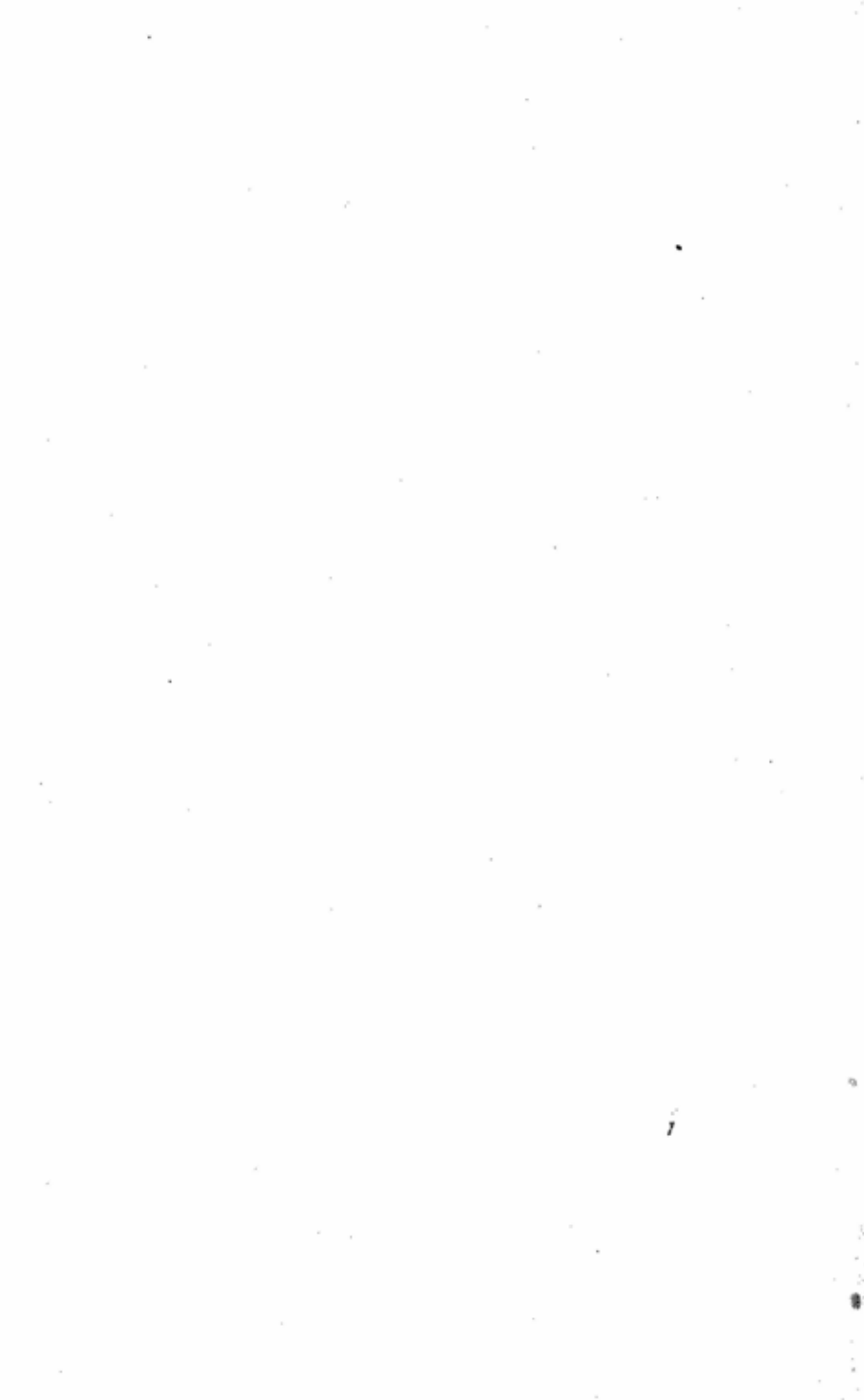


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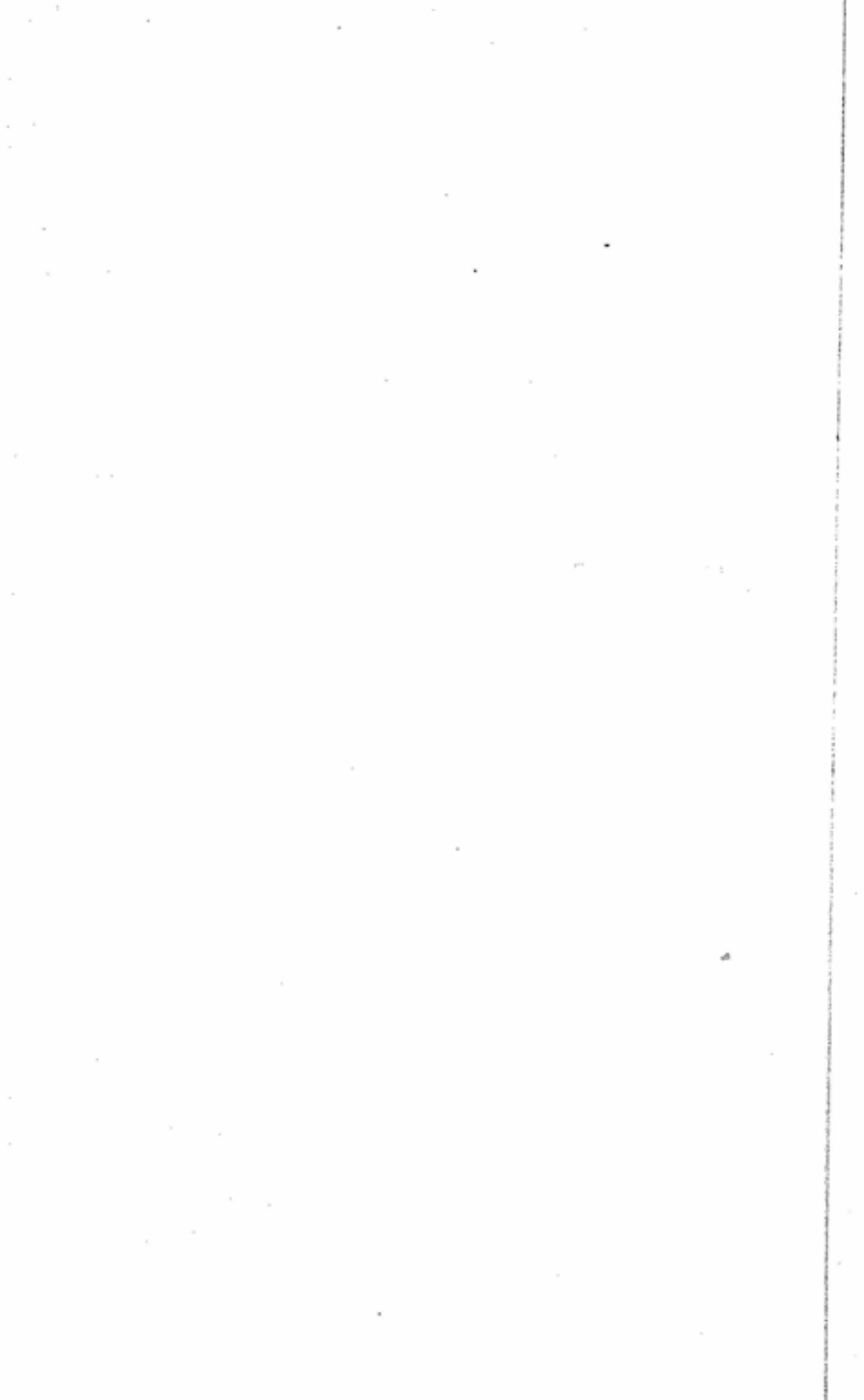


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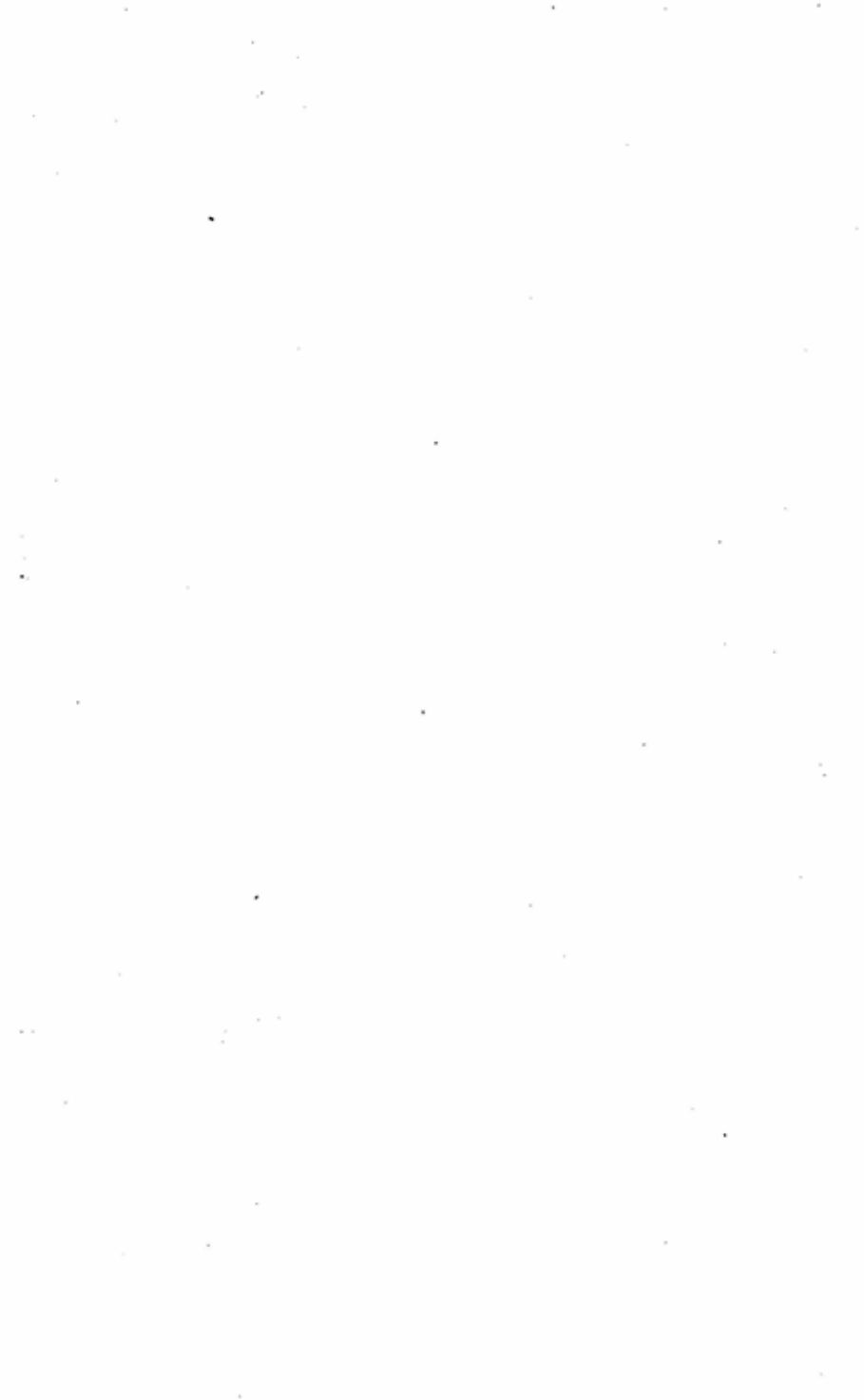


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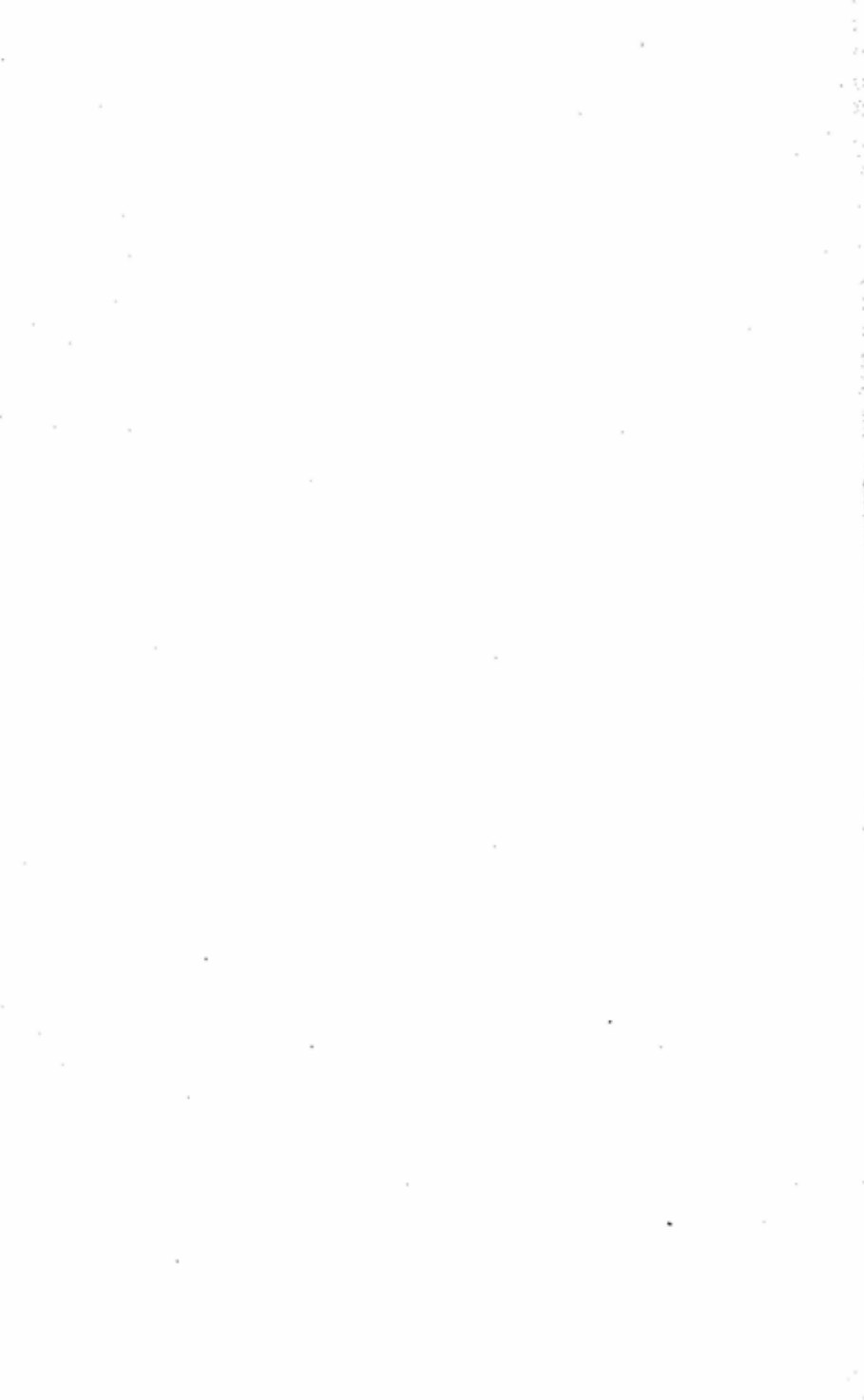


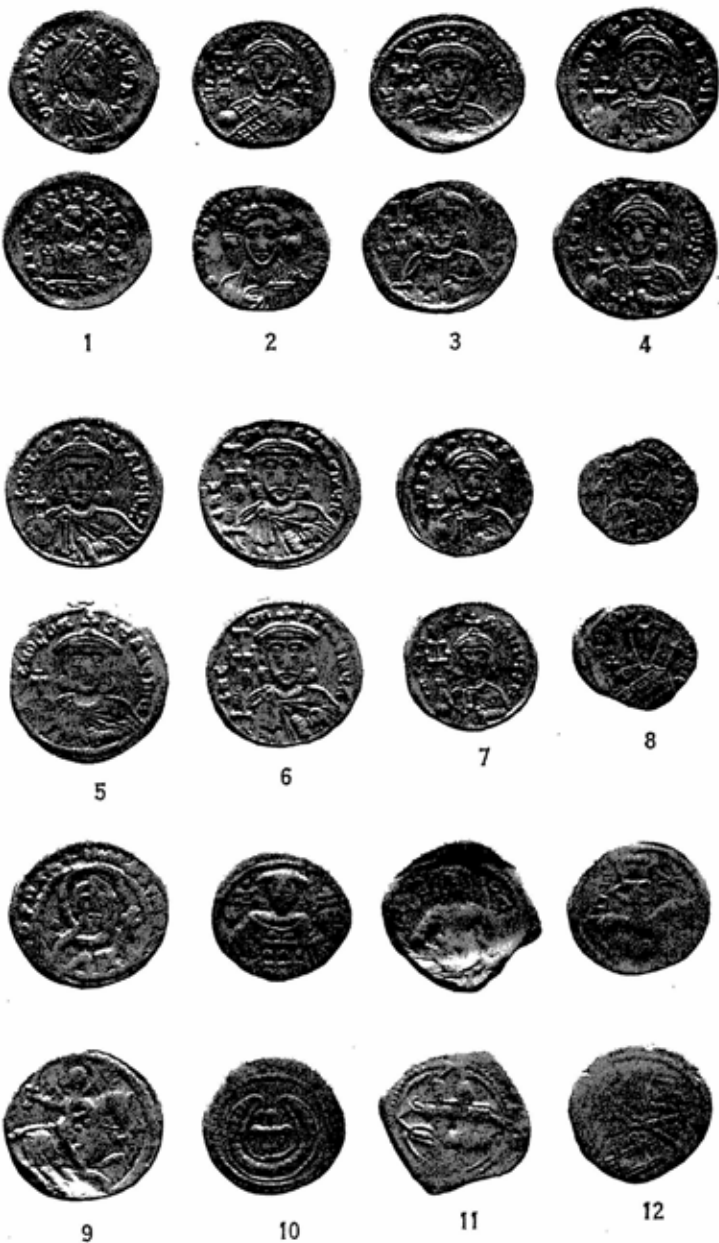
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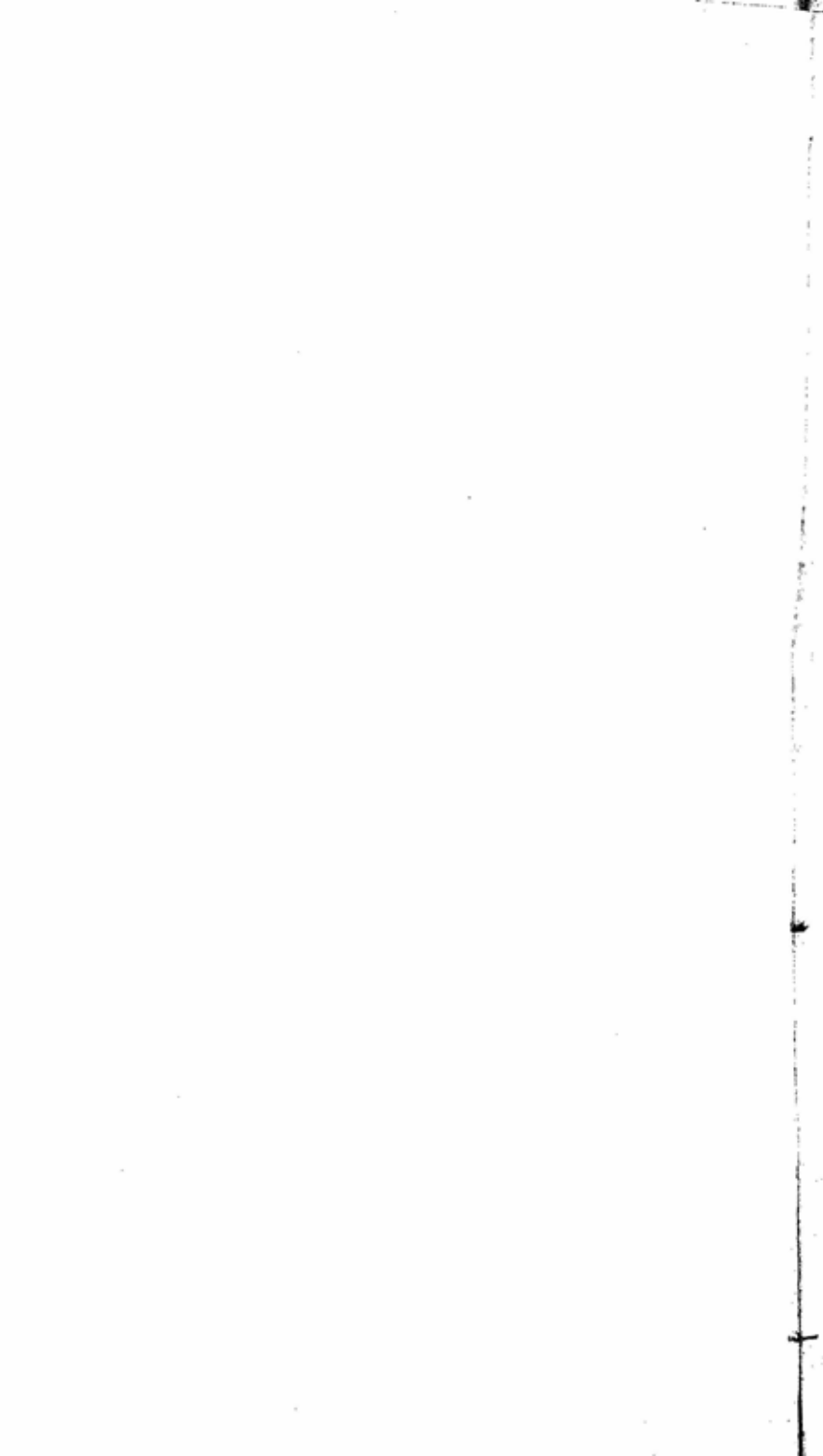




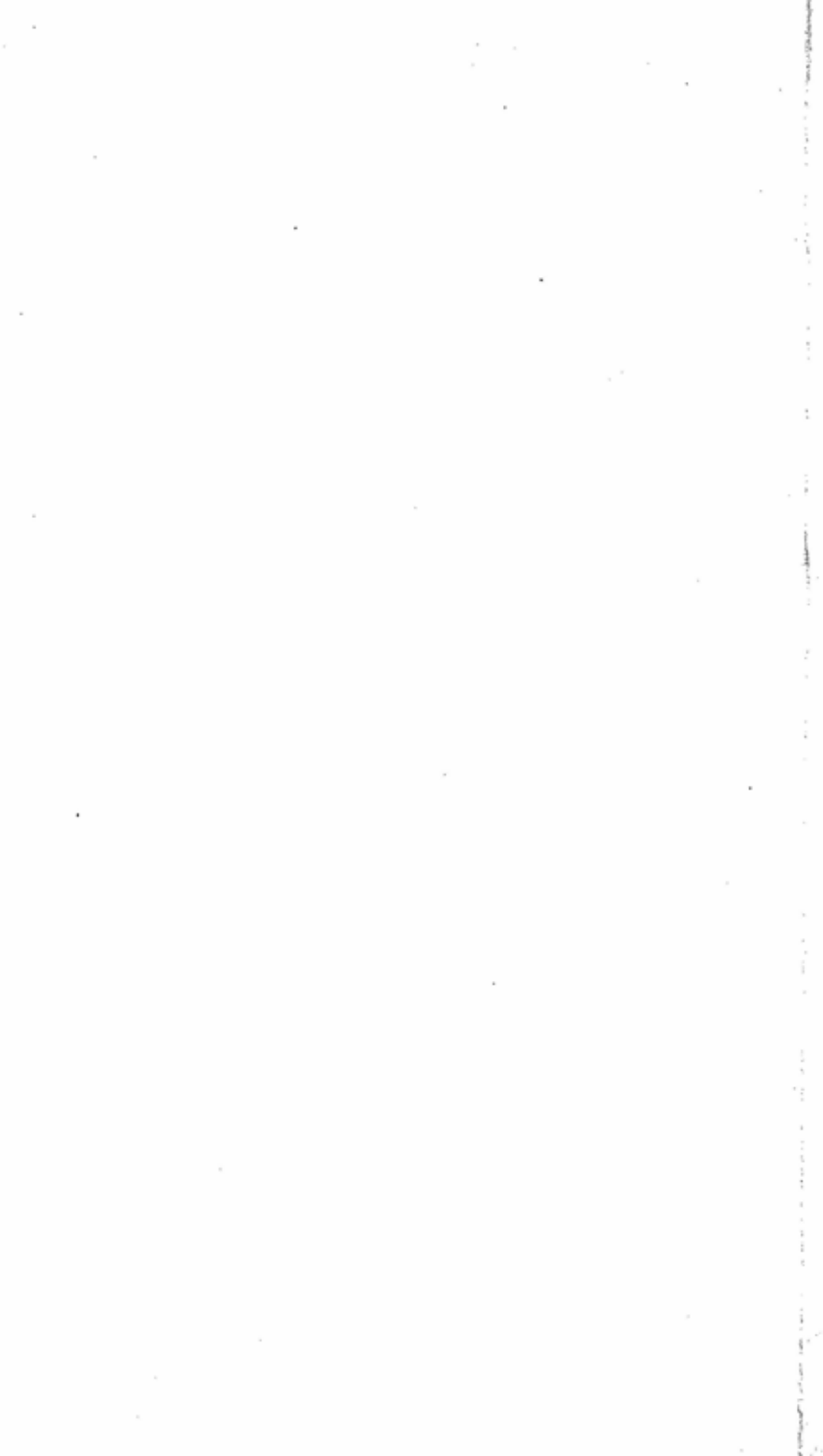




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- 1916 GILLIES, WILLIAM, Esq., 204 West George Street, Glasgow.
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- 1920 GINORI, MARCHESE ROBERTO VENTURI, 75 Via della Scala, Florence, Italy.
- 1906 GLOUCESTER, THE RIGHT REV. THE LORD BISHOP OF, The Palace, Gloucester.
- 1894 GOODACRE, HUGH, Esq., Ullesthorpe Court, Lutterworth, Leicestershire.
- 1904 GRAHAM, T. HENRY BOILEAU, Esq., F.S.A., Oxford and Cambridge Club, Pall Mall, S.W. 1.
- 1891 *GRANTLEY, LORD, D.L., J.P., F.S.A., Weeke Manor, Winchester, Hants.

ELECTED

- 1914 GROSE, S. W., Esq., M.A., 18 Hobson Street, Cambridge.
- 1910 †GUNN, WILLIAM, Esq., 19 Swan Road, Harrogate.
- 1916 HAINES, GEOFFREY COLTON, Esq., Green Gable, Balmuir Gardens, S.W. 15, *Hon. Treasurer*.
- 1899 HALL, HENRY PLATT, Esq., Pentreheylin Hall, Llanymynech, Montgomeryshire.
- 1904 HARRISON, FREDERICK A., Esq., F.Z.S., Sunnyside, Fourth Avenue, Frinton-on-Sea, *Librarian*.
- 1916 *HART, R. EDWARD, Esq., M.A., Brooklands, Blackburn.
- 1928 HAYTER, G. C. F., Esq., B.A., F.S.A., 40 Arkwright Road, Hampstead, N.W. 3.
- 1931 HEDLEY, W. PERCY, Esq., Gresham House, Corbridge, Northumberland.
- 1886 *HENDERSON, JAMES STEWART, Esq., F.R.G.S., M.R.S.L., M.C.P., 1 Pond Street, Hampstead, N.W. 3.
- 1929 HERRICK, FREDERICK M., Esq., 43 Exchange Place, New York, U.S.A.
- 1930 HERZFELDER, HUBERT, Esq., Mahlerstr. 4. Vienna.
- 1900 HEWLETT, LIONEL M., Esq., Greenbank, Byron Hill, Harrow-on-the-Hill, Middlesex.
- 1893 HILL, GEORGE FRANCIS, Esq., C.B., M.A., LL.D., Litt.D., F.S.A., F.B.A., *Director and Principal Librarian*, British Museum, W.C. 1.
- 1895 HODGE, THOMAS, Esq., Fyning House, Rogate, Petersfield, Hants.
- 1920 *HOLROYD, MICHAEL, Esq., M.A., F.S.A., Brasenose College, Oxford.
- 1921 HUBBARD, WING-COMMANDER T. O'BRIEN, M.C., R.A.F., Royal Aero Club, W. 1.
- 1908 *HUNTINGTON, ARCHER M., Esq., Governor of the American Numismatic Society, Audubon Park, 156th Street, West of Broadway, New York, U.S.A.
- 1922 JAMESON, M. R., 38 Rue de Provence, Paris.
- 1922 JOHNSON, COLONEL SIR ROBERT A., K.B.E., T.D., M.A., Deputy Master, The Royal Mint, E. 1.
- 1911 JOHNSTON, LEONARD P., Esq., The Cottage, Warningcamp, Arundel, Sussex.
- 1926 KENT NUMISMATIC SOCIETY, THE, Brewer Street, Maidstone.
- 1874 †KENYON, R. LLOYD, Esq., M.A., J.P., D.L., Pradoc, West Felton, Salop.

ELECTED

- 1914 *KERR, ROBERT, Esq., M.A., Royal Scottish Museum, Edinburgh.
- 1920 KING, COLONEL E. J., C.M.G., M.A., F.S.A., The Old House, East End Road, N. 2.
- 1901 KOZMINSKY, DR. ISIDORE, 20 Queen Street, Kew, near Melbourne, Victoria.
- 1928 KRAUS, DR. FRANZ FERDINAND, 1 Friedensallee, Brunswick.
- 1922 KRISHNA IYENGAR, PROFESSOR M. H., M.A., D.Litt., M.R.A.S., The University, Mysore.
- 1917 LAMB, MISS WINIFRED, Holly Lodge, Campden Hill, W. 8.
- 1920 LAST, H. M., Esq., M.A., St. John's College, Oxford.
- 1885 *LAWRENCE, L. A., Esq., F.S.A., 44 Belsize Square, N.W. 3.
- 1883 *LAWRENCE, RICHARD HOE, Esq., Fifth Avenue Bank, New York, U.S.A.
- 1920 LEWIS, JOHN CAMPBELL, Esq., Bridge House, Troedyrhiw, Merthyr Tydfil.
- 1930 LINCOLN, F. W., Esq., 1 Midhurst Mansions, Muswell Hill, N. 10.
- 1922 LLOYD, ALBERT H., Esq., Ph.D., F.S.A., St. John's House, 73 Grange Road, Cambridge.
- 1922 *LLOYD, MISS MURIEL ELEANOR HAYDON, St. John's House, 73 Grange Road, Cambridge.
- 1907 LOCKETT, RICHARD CYRIL, Esq., J.P., F.S.A., 58 Cadogan Place, S.W. 1.
- 1911 LONGMAN, W., Esq., F.S.A., 23 Glebe Place, S.W. 3.
- 1924 DE LOREY, M. EUSTACHE, 46 Avenue du Président Wilson, Paris XVI.
- 1921 LUCKNOW MUSEUM, The Curator of the, Lucknow, India.
- 1893 LUND, H. M., Esq., Waitara, Taranaki, New Zealand.
- 1895 MACDONALD, SIR GEORGE, K.C.B., M.A., LL.D., D.Litt., F.B.A., 17 Learmonth Gardens, Edinburgh.
- 1901 MACFADYEN, FRANK E., Esq., 17 St. George's Terrace, Newcastle-on-Tyne.
- 1923 MALLINSON, REV. ARNOLD, St. Thomas's Vicarage, Oxford.
- 1912 MATTINGLY, HAROLD, Esq., M.A., British Museum, W.C. 1.
- 1905 MAVROGORDATO, J., Esq., Gilridge, Cowden Pound, Edenbridge, Kent.
- 1901 McDOWALL, REV. STEWART A., 5 Kingsgate Street, Winchester.
- 1929 McNICKLE, A. J. S., Esq., c/o Royal Mail Steam Packet Co., Royal Mail House, E.C. 2.

ELECTED

- 1916 MEIGH, ALFRED, Esq., Dole Spring House, Forsbrook, Stoke-on-Trent.
- 1905 MESSENGER, LEOPOLD G. P., Esq., 151 Brecknock Road, Tufnell Park, N. 19.
- 1928 MIDDLETON, LAWRENCE H., Esq.; M.A., 11 A High Street, N.W. 8.
- 1929 MILBANK, S. R., Esq., Panfield, Huntingdon, New York, U.S.A.
- 1924 MILLER, HOYT, Esq., East Shore Road, Great Neck, Long Island, New York, U.S.A.
- 1897 MILNE, J. GRAFTON, Esq., M.A., D Litt., 20 Bardwell Road, Oxford.
- 1921 MILNE, MRS. J. GRAFTON, 20 Bardwell Road, Oxford.
- 1910 MITCHELL LIBRARY, THE, Glasgow, The Librarian.
- 1888 MONTAGUE, LIEUT.-COL. L. A. D., Penton, near Crediton, Devon.
- 1879 MORRISSON, LIEUT.-COL. H. W., F.S.A., F.R.S.A., 42 Beaufort Gardens, S.W. 3.
- 1904 MOULD, RICHARD W., Esq., Newington Public Library, Walworth Road, S.E. 17.
- 1916 *MYLNE, EVERARD, Esq., St. Andrew's College, Grahams-town, South Africa.
- 1909 NAGG, STEPHEN K., Esq., 1621 Master Street, Philadelphia, U.S.A.
- 1928 *NAVILLE, MONSIEUR LUCIEN, 5-7 Rue Lévrier, Geneva.
- 1906 NEWBERRY LIBRARY, The Librarian, Chicago, U.S.A.
- 1905 *NEWELL, E. T., Esq., President of the American Numismatic Society, 156th Street, West of Broadway, New York, U.S.A.
- 1931 NIETER, HANS M., Esq., 41 A Golders Green Road, N.W. 11.
- 1930 NORTHUMBERLAND, THE DUKE OF, 17 Princes Gate, S.W. 7.
- 1916 OGLE, CHRISTOPHER, Esq., M.A., Austin Friars House, E.C. 2.
- 1882 OMAN, PROFESSOR SIR CHARLES, M.P., K.B.E., M.A., D.C.L., LL.D., F.S.A., F.B.A., All Souls College, Oxford, *Vice-President*.
- 1925 OMAN, CHARLES CHICHELE, Esq., M.A., Victoria and Albert Museum, S.W. 7.
- 1931 O'NEIL, B. H. ST. JOHN, Esq., 14 Crescent Road, Beckenham, Kent.
- 1911 OPPENHEIMER, HENRY, Esq., F.S.A., 9 Kensington Palace Gardens, W. 8.
- 1904 ORBELIANI, COL. PRINCE ROMAN, F.R.G.S., Corn Exchange Bank, 360 Park Avenue, New York City, U.S.A.

ELECTED

- 1922 PAKENHAM, IVO R. R. L., Esq., St. James's Club, 106 Piccadilly, W. 1.
- 1903 PARSONS, H. ALEXANDER, Esq., Elmburst, Holly Park, N. 4.
- 1926 PEARCE, J. W. E., Esq., M.A., 10 Cromwell Place, S.W. 7.
- 1917 PHIPPS, LIEUT.-COL. P. RAMSAY, F.R.G.S., 17 St. James's Court, S.W. 1.
- 1927 PINCHES, JOHN ROBERT, Esq., 21 Albert Embankment, S.E. 11.
- 1928 PIRIE GORDON, H., Esq., D.S.C., M.A., 46 Addison Avenue, W. 11.
- 1927 POND, SHEPARD, Esq., 258 Boylston Street, Boston, Mass., U.S.A.
- 1923 PRAGUE, Bibliothèque de l'Université, Czecho-Slovakia.
- 1903 PRICE, HARRY, Esq., Arun Bank, Pulborough, Sussex.
- 1913 RAO, K. ANANTASAMI, Esq., Curator of the Government Museum, Bangalore, India.
- 1890 RAPSON, PROFESSOR E. J., M.A., M.R.A.S., 8 Mortimer Road, Cambridge.
- 1923 RAVEL, MONSIEUR O., 7 Bd. de Lorraine, Pointe Rouge, Marseilles.
- 1930 RAWSON, L. H., Esq., Atholl Bank, Lovelace Road, Surbiton.
- 1909 RAYMOND, WAYTE, Esq., 489 Park Avenue, New York City, U.S.A.
- 1903 REGAN, W. H., Esq., 79 Westbourne Grove, W. 2.
- 1876 *ROBERTSON, J. DRUMMOND, Esq., M.A., Comrie Lodge, Higher Warberry Road, Torquay.
- 1911 *ROBINSON, E. S. G., Esq., M.A., F.S.A., 23 Upper Phillimore Gardens, W. 8.
- 1910 ROGERS, THE VERY REV. EDGAR, O.B.E., M.A., F.S.A., The Deanery, Bocking, Essex.
- 1928 ROGERS, KENNETH, Esq., O.B.E., M.D., Namouna, 25 West-cliff Road, Bournemouth.
- 1924 ROWE, CAPTAIN FRANCIS G. C., Ebrington Barracks, Londonderry.
- 1919 RYAN, V. J. E., Esq., Le Grand Hôtel, Montreux-Territet, Switzerland.
- 1916 SAINT LOUIS NUMISMATIC SOCIETY, Washington University, St. Louis, Mo., U.S.A.
- 1872 *SALAS, MIGUEL T., Esq., 247 Florida Street, Buenos Ayres.
- 1916 *SALISBURY, F. S., Esq., M.A., Dorset House, Parkland Grove, Ashford, Middlesex.

ELECTED

- 1919 SAVAGE, W. LISLE, Esq., 11 Faith Street, Maidstone, Kent.
 1917 SEABY, B. A., Esq., Oxford Circus House, W. 1.
 1907 *SELTMAN, CHARLES T., Esq., M.A., 39 Barton Road, Cambridge.
 1890 SELTMAN, E. J., Esq., Villa Maria, S. Giorgio a Cremano, Naples.
 1913 SHIRLEY-FOX, J. S., Esq., R.B.A., 3 Lansdown Crescent, Bath.
 1893 *SIMS, BRIG.-GENERAL R. F. MANLEY-, C.M.G., D.S.O., 163 Strand, W.C. 2.
 1896 SINHA, KUMVAR KUSHAL PAL, M.A., RAIS OF KOTLA, Kotla, Agra, India.
 1918 *SLIGO, THE MARQUESS OF, F.S.A., F.R.G.S., 7 Upper Belgrave Street, S.W. 1.
 1905 SNELLING, EDWARD, Esq., 26 Silver Street, E.C. 2.
 1930 SNIJDER, PROFESSOR G. A. S., Allard Pierson Stichting, Weesperzijde 33, Amsterdam (O.).
 1909 SOUTZO, M. MICHEL, 8 Strada Romana, Bucharest.
 1922 SPENCER-CHURCHILL, CAPT. E. G., M.C., F.S.A., Northwick Park, Blockley, Worcestershire.
 1925 SPINK, MARTIN S., Esq., M.A., 5-7 King Street, S.W. 1.
 1894 SPINK, SAMUEL M., Esq., 5-7 King Street, S.W. 1.
 1902 STAINER, CHARLES LEWIS, Esq., Woodhouse, Iffley, Oxford.
 1922 STARKEY, W. BEAMONT, Esq., Lyonsdown, Ilfracombe.
 1928 STEBBING, W. P. D., Esq., F.S.A., Fiveways, Deal.
 1914 †STREATFEILD, MRS. SYDNEY, 22 Park Street, W. 1.
 1910 SUTCLIFFE, ROBERT, Esq., 21 Market Street, Burnley, Lancs.
 1914 SYDENHAM, REV. EDWARD A., M.A., The Vicarage, West Molesey, Surrey.
 1885 SYMONDS, HENRY, Esq., F.S.A., 19 Ellenborough Park N., Weston-super-Mare.

 1896 *TAPPS, H. W., Esq., 35 Greenholm Road, Eltham, S.E. 9.
 1879 †TALBOT, COL. THE HON. MILO G., C.B., Bifrons, Canterbury.
 1919 TARAPOREVALA, VICAJI D. B., Esq., Sunama House, 140 Cumballa Road, Bombay.
 1917 TAYLOR, GLEN A., Esq., F.S.A., 63 Lewis Road, Neath, Glamorgan.
 1925 THOMAS, CECIL, Esq., 7 Gloucester Terrace, S.W. 7.
 1920 THOMAS, J. ROCHELLE, Esq., 18 Ilchester Place, W. 14.

ELECTED

- 1918 THORBURN, PHILIP, Esq., B.A., 49 South Side, Clapham Common, S.W. 4.
- 1929 TORONTO, University of, The Librarian, Canada.
- 1894 TRIGGS, A. B., Esq., 33 Macquarie Place, Sydney, New South Wales.
- 1912 VAN BUREN, DR. A. W., American Academy, Porta San Pancrazio, Rome.
- 1916 VANES, REV. J. A., Morton House, Cheddleton, Leek, Staffs.
- 1899 VLASTO, MICHEL P., Esq., 12 Allée Léon Gambetta, Marseilles, France.
- 1923 WALES, THE NATIONAL MUSEUM OF, Cardiff.
- 1924 WALLWORTH, I. N. G., Esq., Fairbanks, Stanley Park Road, Carshalton.
- 1897 †WALTERS, FREDK. A., Esq., F.S.A., 28 Great Ormonde Street, W.C. 1, and St. Mildred's, Temple Ewell, Dover, *Honorary Secretary*.
- 1911 WARRE, FELIX W., Esq., O.B.E., M.C., 128 Church Street, W. 8.
- 1920 *WATSON, COMMANDER HAROLD NEWALL, R.N., Belmont, 10 Curzon Park, Chester.
- 1901 *WATTERS, CHARLES A., Esq., Springfields, Park Road, Hayton, Liverpool.
- 1917 WATTS, GERALD A., Esq., Drumlerry, Londonderry.
- 1901 WEBB, PERCY H., Esq., M.B.E., 4 and 5 West Smithfield, E.C. 1, *President*.
- 1885 *WEBER, F. PARKES, Esq., M.D., F.S.A., 13 Harley Street, W. 1.
- 1920 *WHEELER, ERNEST H., Esq., 36 Shepherds Hill, N. 6.
- 1915 WHITEHEAD, R. B., Esq., M.A., M.R.A.S., I.C.S. (ret'd.), 30 Millington Road, Cambridge.
- 1908 WILLIAMS, T. HENRY, Esq., 15 Stanwick Road, W. 14.
- 1910 WILLIAMS, W. I., Esq., Bryn Deri, Hereford Road, Abergavenny.
- 1906 WOOD, HOWLAND, Esq., Curator of the American Numismatic Society, 156th Street, W. of Broadway, New York, U.S.A.
- 1920 WOODWARD, W. H., Esq., 702 Chateau St. Louis, Grande Allée, Quebec, Canada.
- 1920 *WOODWARD, A. M. TRACEY, Esq., Chateau Millefleurs, Cadaujac, Gironde, France.

ELECTED

- 1903 WRIGHT, H. NELSON, Esq., I.C.S. (retd.), 42 Ravenscroft Avenue, N.W. 11.
- 1920 WYMAN, ARTHUR CRAWFORD, Esq., 29 Place Dauphine, Paris I.
- 1922 YOANNA, A. DE, Esq., B.A., M.D., 111 Pierrepont Street, Brooklyn, New York, U.S.A.
- 1880 YOUNG, ARTHUR W., Esq., 12 Hyde Park Terrace, W. 2.
- 1919 ZIEGLER, PHILIP, Esq., Lilly Villa, Victoria Park, Manchester.

HONORARY FELLOWS

ELECTED

- 1898 HIS MAJESTY VICTOR EMMANUEL III, KING OF ITALY,
Palazzo Quirinale, Rome.
- 1930 ALFÖLDI, PROFESSOR ANDREAS, 8 Baross, N. 15, Budapest.
- 1903 BAHRFELDT, GENERAL DER INFANTERIE A. D., PROFESSOR
MAX VON, Dr.Phil., Zinksgarten-Strasse 2, Halle (Saale),
Germany.
- 1898 BLANCHET, M. ADRIEN, Membre de l'Institut, 10 Bd.
Émile Augier, Paris XVI.
- 1926 DIEUDONNÉ, MONSIEUR A., Conservateur des Médailles,
Bibliothèque Nationale, Paris.
- 1899 GABRICI, PROFESSOR DR. ETTORE, Via Formale 30, Naples.
- 1904 KUBITSCHKE, PROFESSOR J. W., Pichlergasse 1, Vienna IX.
- 1898 LOEBBECKE, HERR A., Cellerstrasse 1, Brunswick.
- 1904 MAURICE, M. JULES, 15 Rue Vaneau, Paris VII.
- 1899 PICK, DR. BEHRENDT, Münzkabinett, Gotha.
- 1926 TOURNEUR, M. VICTOR, Conservateur des Médailles, Biblio-
thèque Royale, Brussels.

MEDALLISTS

OF THE ROYAL NUMISMATIC SOCIETY

ELECTED

- 1883 CHARLES ROACH SMITH, Esq., F.S.A.
- 1884 AQUILLA SMITH, Esq., M.D., M.R.I.A.
- 1885 EDWARD THOMAS, Esq., F.R.S.
- 1886 MAJOR-GENERAL ALEXANDER CUNNINGHAM, C.S.I., C.I.E.
- 1887 JOHN EVANS, Esq., D.C.L., LL.D., F.R.S., P.S.A.
- 1888 DR. F. IMHOOF-BLUMER, Winterthur.
- 1889 PROFESSOR PERCY GARDNER, Litt.D., F.S.A.
- 1890 MONSIEUR J. P. SIX, Amsterdam.
- 1891 DR. C. LUDWIG MÜLLER, Copenhagen.
- 1892 PROFESSOR R. STUART POOLE, LL.D.
- 1893 M. W. H. WADDINGTON, Sénateur, Membre de l'Institut, Paris.
- 1894 CHARLES FRANCIS KEARY, Esq., M.A., F.S.A.
- 1895 PROFESSOR DR. THEODOR MOMMSEN, Berlin.
- 1896 FREDERIC W. MADDEN, Esq., M.R.A.S.
- 1897 DR. ALFRED VON SALLET, Berlin.
- 1898 THE REV. CANON W. GREENWELL, M.A., F.R.S., F.S.A.
- 1899 M. ERNEST BABELON, Membre de l'Institut, Paris.
- 1900 PROFESSOR STANLEY LANE-POOLE, M.A., Litt.D.
- 1901 S. E. BARON WLADIMIR VON TIESSENHAUSEN, St. Petersburg.
- 1902 ARTHUR J. EVANS, Esq., M.A., F.R.S., F.S.A.
- 1903 M. GUSTAVE SCHLUMBERGER, Membre de l'Institut, Paris.
- 1904 HIS MAJESTY VICTOR EMMANUEL III, KING OF ITALY.
- 1905 SIR HERMANN WEBER, M.D.
- 1906 COMM. FRANCESCO GNECCHI, Milan.
- 1907 BARCLAY V. HEAD, Esq., D.Litt., D.C.L., Ph.D., Corr. de l'Inst.
- 1908 PROFESSOR DR. HEINRICH DRESSSEL, Berlin.
- 1909 HERBERT A. GRUEBER, Esq., F.S.A.
- 1910 DR. FRIEDRICH EDLER VON KENNER, Vienna.
- 1911 OLIVER CODRINGTON, Esq., M.D., M.R.A.S., F.S.A.
- 1912 GENERAL-LEUTNANT MAX VON BAHRFELDT, Hildesheim.
- 1913 GEORGE MACDONALD, Esq., M.A., LL.D.
- 1914 JEAN N. SVORONOS, Athens.
- 1915 GEORGE FRANCIS HILL, Esq., M.A.
- 1916 M. THÉODORE REINACH, Membre de l'Institut, Paris.
- 1917 L. A. LAWRENCE, Esq., F.S.A.
- 1918 Not awarded.
- 1919 M. ADRIEN BLANCHET, Membre de l'Institut, Paris.
- 1920 H. B. EARLE-FOX, Esq., and J. S. SHIRLEY-FOX, Esq.
- 1921 PERCY H. WEBB, Esq.
- 1922 FREDERICK A. WALTERS, Esq., F.S.A.
- 1923 PROFESSOR J. W. KUBITSCHKE, Vienna.
- 1924 HENRY SYMONDS, Esq., F.S.A.
- 1925 EDWARD T. NEWELL, Esq., New York.
- 1926 R. W. MACLACHLAN, Esq., Montreal.
- 1927 M. A. DIEUDONNÉ, Paris.
- 1928 SIR CHARLES OMAN, K.B.E., M.P., D.C.L., F.B.A.
- 1929 MONSIEUR JULES MAURICE, Paris.
- 1930 REV. EDWARD A. SYDENHAM, M.A.
- 1931 MISS HELEN FARQUHAR.

PROCEEDINGS OF THE
ROYAL NUMISMATIC SOCIETY.

PROCEEDINGS OF THE ROYAL NUMISMATIC SOCIETY.

SESSION 1930—1931.

OCTOBER 16, 1930.

PERCY H. WEBB, Esq., M.B.E., President, in the Chair.

The Minutes of the Meeting of May 15 were read and approved.

The following Presents to the Society were announced, and thanks ordered to be sent to their donors:

1. Aarbøger for Nordisk Oldkyndighed, 1929.
2. Antiquaries Journal, Vol. x, Pts. 3-4.
3. Archaeologia Aeliana, 1930, Vol. vii.
4. British Museum Quarterly, Vol. v, Pt. 1.
5. Bulletin de Correspondance Hellénique, 1929, Pt. 1.
6. Journal of the Royal Society of Antiquaries of Ireland, 1930, Pt. 1.
7. Journal of Hellenic Studies, 1930, Pt. 1.
8. Revue Numismatique, 1930, Pts. 1 and 2.
9. Rassegna Numismatica, 1930, August.
10. Mitteilungen d. deutsch. Arch. Instit., Vol. 44, Pts. 1-4, Vol. 45, Pts. 1 and 2.
11. Proceedings of the Soc. Ant. Scotland, 1928-9.
12. Syria, Vol. x, Pts. 3 and 4; Vol. xi, Pts. 1 and 2.
13. Catalogue of the Montague Guest collection of Badges, Tokens, and Passes; *from the Trustees of the British Museum.*
14. L. Laffranchi. (a) Le zecche dell' Italia Superiore al tempo di Roma Imperiale, (b) Commento Numismatico alla storia dell' Imperatore Magnenzio e del suo tempo.
15. Dr. G. Severeanu. Un Mobilier funéraire trouvé à Kallatis.

Mr. Henry Garside congratulated the new President on his first appearance in the chair and wished him a happy period of office.

His Grace the Duke of Northumberland, Christopher C. Browne, Esq., and Mr. Hubert Herzfelder were proposed for election as Fellows of the Society.

Mr. J. W. E. Pearce exhibited two unpublished coins of Valentinian II, one with AVGG in the place of the usual AVGGG and the other a *vota* coin of the Lyons mint.

Mr. Henry Garside showed a Rumanian 20 lei and 5 lei piece of Michael I dated 1930.

Mr. H. P. Hall exhibited five very rare Roman aurei of Flavius Victor, Priscus Attalus, Licinia Eudoxia, Petronius Maximus, and Glycerius. He also showed a fine Vespasian first brass with reverse Mars and a second brass of Galba, *rev.* Victory.

Mr. L. A. Lawrence, F.S.A., showed 2 nobles of Richard II from the same obverse die; on the second the flag had been stamped in for the Calais mint.

Mr. F. A. Harrison showed a lead cast from the Chelmsford Museum of the 200 gold mohur piece of Shah Jahan of A.H. 1064.

Rev. Edgar Rogers exhibited a cast of a sequin of Antoine Fluvian, Grand Master of Rhodes 1421-37.

Mr. William Gilbert showed an aureus (Cohen 4) of Julian the Tyrant in Pannonia 328, from the Vienna Museum duplicates.

Mr. L. L. Fletcher showed two copper coins of Mantua of the eighteenth century with the head of Virgil.

Miss Helen Farquhar read a paper on the Forlorn Hope Medal of Charles I. A study of the documents available and of the medals of Charles I which might be considered in this connexion had convinced her that the title could no longer be given to the fine medallion, *Med. Ill.*, Vol. i, p. 301, no. 122, with which Hawkins had identified it. A "Brief ordering badges in a Forlorn Hope" which is preserved in

the Bodleian Library has fortunately at the top a woodcut of the medal in question. It has a jugate portrait and can be identified as the "military reward" medal conferred on Sir Robert Welch and Sir John Smith (*Med. Ill.*, Vol. i, p. 302, no. 123). This paper was published in the *Num. Chron.*, 1930, pp. 316-29.

NOVEMBER 20, 1930.

PERCY H. WEBB, Esq., M.B.E., President, in the Chair.

The Minutes of the Meeting of October 16 were read and approved.

His Grace the Duke of Northumberland, Mr. C. C. Browne, and Mr. Hubert Herzfelder were elected Fellows of the Society.

Mr. H. Garside exhibited a Portuguese ten escudo piece dated 1928 struck to commemorate the battle of Ourique in 1139, when the Almoravids were defeated by the Portuguese, who then asserted their independence under Affonso Henriques.

Mr. William Gilbert showed a solidus of Euphemia, wife of Anthemius, of which only 3 specimens are known.

The President exhibited a double-struck antoninianus of Carausius with the very unusual mint-mark $\frac{F | O}{C}$

Mr. F. A. Walters, F.S.A., exhibited a billon antoninianus of Postumus, reverse IOVI VICTORI; Jupiter, with spear and thunderbolt, advancing left. In field c.a. for Colonia Agrippina (Cologne): a rare coin.

He also showed a small medallion of Antoninus Pius of dupondius size, rev. Pietas casting incense on a lighted altar, with a garlanded column surmounted by a vase on the right, no s. c. The bust is unusual and in high relief.

Mr. Brooke, in the absence from illness of the author, read a paper by Mr. Mattingly, reviewing the various types with legend *Fel. Temp. Reparatio*, and suggesting that they were a jubilee coinage of the eleventh centenary of the foundation of Rome, and therefore struck in the year

A.D. 348. The practice of anniversary commemoration was peculiarly Roman, and appeared in the annual, quinquennial, and decennial vows. The great jubilee celebrations at Rome were the *Ludi Saeculares*, which, strictly celebrating *saecula* of 110 years, actually occurred whenever the Emperor desired, as no *terminus a quo* was ever officially fixed for the reckoning of the *saecula*. Thus in A.D. 17, 48, 88, and 204 *Ludi Saeculares* had been held. The ceremonial observances as well as the other proceedings of the secular games are preserved in the types of coins of Augustus, Domitian, Severus, and Philip senior, though Claudius did not commemorate on his coinage the ceremonies of A.D. 48.

In A.D. 348, the eleventh centenary or tenth *saeculum* of the foundation of Rome, Constantius II and Constans suggest, in the *Fel. Temp. Reparatio* coinage, a restoration of the past glory of Rome; the legend, interpreted as *Felix* rather than *Felicitium*, denoted "Happy Anniversary", and the coin-types were reminiscent of the success of Roman armies in Persia and Germany, or of the Emperor civilizing barbarians, steering a prosperous course with Victory at the helm, or holding the immortal phoenix, the symbol of revolving ages.

Two new names of coin-denominations, *miliarensis* and *centenionalis*, were introduced in 348 in honour of the thousand-and-one-hundredth anniversary, being coins of 1,000 and 100 units with a *maiorina* of 200 units; the *decargyrus* would be the same as the *centenionalis*.

Mr. F. S. Salisbury made the following comments on the paper:

A series of overlapping hoards indicates that the principal *Fel. Temp. Reparatio* types were struck in succession. The most important find was at Croydon, described by Dr. G. F. Hill (*Num. Chron.*, 1905) who dates it to the early summer of A.D. 351, since Decentius is absent in spite of the large representation (724) of Magnentius. It contained only two main *Fel. Temp. Reparatio* types: (1) Galley type of both varieties, 853 emperor holding phoenix, 1,037 (of which 896 Constans) holding Victory. Magnen-

tius has 1 of the former variety, 99 of the latter. It did not, he thought, follow that their issue was continuous with the corresponding legitimate coinage from the same mints. (2) Legionary and Horseman 238, mostly Constantius. There is, of the Hut type only one coin, of the Phoenix none. Dr. Hill notes that the Hut and Galley types both occur in the earlier Damery (Marne) hoard, which contained no coins of Magnentius. The Cobham Park hoard (*Num. Chron.*, 1885) was buried later: Magnentius has 419 and Decentius appears with 11. Site finds covering the whole of their reigns give, at Richborough, a proportion of 12 to 1 between them. The hoard also begins earlier with only two of the Phoenix type, followed by Hut (95), Galley (279), Legionary and Horseman (29).

Site finds also suggest that the Phoenix type ends before the death of Constans (Jan. 350) and associate it chiefly with him. At Richborough (Reports I and II) he has 47 to 12 of Constantius. On the other hand the late beginning of the Legionary and Horseman coin is shown by their relative fewness in the hoards quoted, whereas in site finds the prolongation of their issue right down to Julian gives Constantius a large majority over Constans (at Richborough 118 to 23) and makes this much the commonest of all the *Fel. Temp. Reparatio* types.

The Phoenix type is the only one which by itself as well as by its legend is specially appropriate to the secular celebrations (A.U.C. 1100). We may assign it to their actual year. Pliny (X. 2, 3, 3) tells us that a phoenix was exhibited in the Forum at the time of the secular games in the first century A.D. (A.U.C. 800), *quem nemo falsum dubitavit*; but it was quite as genuine as the bird on the coins.

Following the Phoenix type we may arrange the Hut, Galley with Phoenix, Galley with Victory, and Legionary spearing Horseman in that order. The succession is rapid, for the Legionary and Horseman coins of Constans show that the type begins as early as the last part of A.D. 349. We owe to the revolt of Magnentius the burial of the series of short period hoards which reveal the sequence.

The President and Mr. Pearce also spoke.

DECEMBER 18, 1930.

PERCY H. WEBB, Esq., M.B.E., President, in the Chair.

The Minutes of the Meeting of November 20 were read and approved.

The following Presents to the Society were announced, and thanks ordered to be sent to their donors:

1. A. R. Bellinger. Catalogue of Coins found at Corinth.
2. Miss Farquhar. Medallie History of Great Britain. 2 Vols.
3. A. Gallatini. Syracuse Dekadrachms of the Euaenetos type.
4. A. Patrigniani. Le Medaglie de Pio vii.
5. G. M. Richter. Animals in Greek Sculpture.

The evening was devoted to Exhibitions.

Mr. Lionel L. Fletcher exhibited a collection of 33 copper coins of Maria Theresa of different mints and 50 seveneenth-century tokens of Co. Tipperary.

Mr. L. A. Lawrence, F.S.A., showed a remarkably fine bronze coin of Hiero II of Syracuse.

Rev. E. A. Sydenham showed contemporary barbarous imitations of denarii of the Republic and Empire, with two exceptions unpublished and possibly unique.

Col. H. W. Morrieson, F.S.A., exhibited the Anglo-Hanoverian $\frac{1}{2}$ and $\frac{1}{4}$ thaler of George I of 1724, the purest coins of the reign.

Mr. Fredk. A. Harrison showed a gold byzant of Michael VII (1071-8).

Rev. Edgar Rogers exhibited a series of bronze coins in remarkable condition of the Aegean Islands: Arcesine, Anaphe (2), Andros, Carthaea (2), Delos, Ios (2), Melos (4), Myconos, Paros (2), Seriphos, Syros (2), Tenos (2).

Mr. Martin Spink showed a small brass of Carausius of Rotomagus mint (?) but no m.m., with legend HERC. DEVSONIENSIS.

Mr. W. P. D. Stebbing, F.S.A., showed a new variety of the Justitia Aug. type of Carausius.

Mr. J. W. E. Pearce exhibited a series of portraits of Valens.

Mr. Fredk. A. Walters, F.S.A., showed 5 sestertii of Galba (Cohen 86, 136, 280, 89, and 1) all belonging to a

special series intended for some purpose, all rare or very rare and with interesting reverses.

Mr. William Gilbert exhibited 12 rare Roman aurei in fine condition: Crispina (Cohen 39), Pertinax (C. 41), Sept. Severus (C. 202), Julia Domna (C. 193), Caracalla (C. 419), Geta (C. 1), Elagabalus (C. 229), Sev. Alexander (C. 387), Gordian III (C. 21), Tacitus (C. 116), Probus (C. 178), Carinus (C. 160).

Mr. C. J. Bunn exhibited a fine series of Byzantine gold coins from Theodosius II to Constantine IX.

Mr. Hubert Herzfelder showed a fine aureus of Brutus, a gold quinarius of Diocletian, a silver quinarius of Julia Maesa, and two cistophori.

Mr. Henry Garside exhibited two silver coins of Costa Rica, namely: Fifty centimos dated 1902 and stamped on the obverse UN COLON (double its face value) and on the reverse the date 1923. Twenty-five centimos dated 1886 and stamped on the reverse 50 CENTIMOS (double its face value) and on the obverse the date 1923. These coins are 900 fine and the object of doubling their value was to make them equal in value to the silver coinage of 500 fine and at the same time practically to demonetize the old silver coinage and to prevent its disappearance from general circulation.

He also showed a Belgian five francs dated 1930 (struck in nickel of the French type) and another of the Flemish type Luxemburg ten francs dated 1929 (struck in silver) and five francs dated 1929 (struck in silver).

JANUARY 15, 1931.

PERCY H. WEBB, Esq., M.B.E., President, in the Chair.

The Minutes of the Meeting of December 18 were read and approved.

Mr. H. St. John O'Neil was proposed for election as a Fellow of the Society.

The following Presents to the Society were announced, and thanks ordered to be sent to their donors :

1. Antiquaries Journal, 1931, Vol. xi, Pt. 1.
2. Schweizerische Numismatische Rundschau, Vol. xxv, Pt. 1.
3. Syria, 1930, Pt. 3.
4. L. M. Mann. Craftsmen's Measures in Prehistoric Times.
5. Sixtieth Annual Report of the Deputy Master of the Mint.

Mr. Brooke exhibited and read a note on an unpublished medal (anti-Jacobite) of the State of Britain 1714-15. Obverse shows affairs at beginning of 1714, Jacobite tares flourishing, le Roi Soleil in splendour, &c. ; Reverse shows affairs at end of 1714—burning of the stubble of Jacobite intrigue—eclipse of le Roi Soleil (actual eclipse on May 3, 1715, visible in London).

Mr. Fletcher showed a medallion 2 kroner piece of Iceland, 1930, and proofs of the nickel penny and halfpenny, 1929, of New Guinea.

Mr. Fredk. Walters, F.S.A., showed a Charles I shilling now attributed to Truro: *obv.* portrait of Oxford type and m.m. rose; *rev.* garniture of shield differs from usual Exeter coin, and an Exeter piece for comparison; he also showed a Papal medal of Pope Pius XI struck to commemorate the Lateran treaty with Italy and the founding of the Vatican city. *Rev.* General bird's-eye view of the city with the Papal arms above.

Mr. Gilbert showed an aureus of Diocletian, *rev.* Emperor holding globe and staff, *cos III.*

The President read a paper by M. Jules Maurice, an honorary Fellow of the Society, in which a new interpretation of the legend *Redditor Lucis Aeternae* on the London medallion of Constantius Chlorus was proposed. *Lux Aeterna* was suggested to be the nightless day in summer in the far north and to refer to Constantius' restoration of these lands to Rome, mentioned in a panegyric on Constantine. A discussion followed in which the President,

Mr. Pearce, and Mr. Salisbury took part. It was suggested that the ingenious suggestion could hardly oust the more obvious and accepted interpretation, which as Mr. Pearce pointed out was confirmed, if necessary, by the reference to the *triste harum provinciarum a Romana luce discidium* in the same panegyric, § 10, 1.

Mr. Lawrence read a paper on a recent find of English fourteenth-century silver at Durham. (This paper is printed in this volume of the *Num. Chron.*)

FEBRUARY 19, 1931.

PERCY H. WEBB, Esq., M.B.E., President, in the Chair.

The Minutes of the Meeting of January 15 were read and approved.

Mr. B. H. St. John O'Neil was elected a Fellow of the Society and Mr. T. G. Barnett, F.S.A., was proposed for election.

Mr. H. W. Taffs exhibited a series of Roman first brass of Didia Clara, Clodius Albina, Manlia Scantilla, Balbinus, and Julia Domna.

Mr. Gilbert showed three very rare Roman tesseræ (all formerly in the Prowe Collection). 1. Julia, daughter of Augustus (I), Cohen viii. 256. 1. 2. Tiberius (III), C. viii. 258. 10. 3. Drusilla, sister of Caligula (II), C. viii. 262, 1, var. Cohen only mentions III and IIII on *rev*.

Mr. Fredk. A. Walters, F.S.A., showed three groats of Edward III of the 1369-77 period of transitional type: the chief features are (1) The indication of the hauberk or chain-mail shirt worn under the surcoat shown by a row of small rings or annulets. (2) The varied titles of the king—one reading

EDWTRD*DI*G*REX*ANGL*7*H*DRS*HIB*7*7

2 the same, but ending 7Q

3 the same, but ending 7R7N7D*HIB

On the reverse of all the legend ends $\text{M}\epsilon\text{V}\text{M}$, the final M being very unusual. (A paper in *Num. Chron.*, 1902, first drew attention to these exceptional groats.)

Mr. B. A. Seaby showed a number of rare English coins including Stephen (Baronial penny, attributed to the Northern counties) and Empress Matilda (penny of Oxford, with her name), Eustace Fitzjohn and the Earl of Derby.

Mr. Sydenham read a paper in which he described two Roman coin finds; one of them of republican denarii of the middle of the first century from Spain was found in a curious earthenware dish which was also exhibited. The other find from Tivoli consisted of denarii of the late first and early second century in most remarkable condition. The former belongs to Mr. L. A. Lawrence and the latter to Mr. Sydenham.

MARCH 19, 1930.

PERCY H. WEBB, Esq., M.B.E., President, in the Chair.

The Minutes of the Meeting of February 19 were read and approved.

Mr. T. G. Barnett, F.S.A., was elected a Fellow of the Society.

The evening was devoted to Exhibitions:

Mr. Webb showed 2 staters of Philip II and a British stater found at Weybridge; an aureus of Diocletian of Cyzicus, $\text{FATIS VICTRICIBVS S} \cdot \text{C}$, and 2 antoniniani of the same mint; a gold coin of Theophilus with Michael III and Constantine VII.

Mr. Webb also exhibited an interesting series of tesserae of Augustus (I and VII), Tiberius (XIII), Caligula (VI and X), Silenus on ass (A 1), Biga with victorious driver bearing palm (V), girl swinging a basket (VII), and OCTAVA ACTI.

Col. H. W. Morrieson, F.S.A., exhibited shillings of Oxford, with two unpublished reverses, D 10 and C 11.

Mr. Fletcher showed 4 tickets of J. Kirk (about 1750) and 9 Madeira tokens issued between 1799 and 1831.

Dr. S. H. Fairbairn showed a medal of the French Revolution, the only medal struck during the period which refers to the execution of the King.

Mr. Hubert Herzfelder showed an aureus of Faustina II.

Mr. H. Garside showed the 2 kronur and 1 krona of Iceland in aluminium bronze of 1925, and the nickel 25 aurar and 10 aurar of the same year, and bronze 5 and 2 aurar and 1 eyrir of 1926.

Mr. L. A. Lawrence, F.S.A., showed a Henry VII profile groat, with bust in tressure and no numeral.

Mr. F. A. Walters, F.S.A., showed a series of 8 groats of profile type of Henry VII of the first "tentative issue", said to be contemporary with the last issue of the full face groats; also a "Septim" shilling of the same issue. The m.m.'s comprised greyhound's head, lys, and cross-crosslet. The attribution is that of Mr. Raymond Carlyon-Britton in a paper in the *B. N. Journal*.

Mr. Wm. Gilbert showed an aureus of Decentius (A.D. 351-3), a variety of Cohen 26 (no sceptre on obverse).

Mr. A. H. F. Baldwin showed (1) an unpublished variety of a Henry IV noble with broken annulets for stops on the obverse, broken annulet above sail, slipped trefoil on rudder, and slipped trefoil on side of ship. (2) Charles I unite, m.m. anchor *below* bust. (3) Aurei in choice condition of Antoninus Pius, Faustina II, Commodus, and Galeria Valeria. (4) the Naval Reward Medal 1653 (*Med. Ill.*, i. 400-28) by Thomas Simon.

Mr. H. P. Hall showed a fine series of 22 aurei of Septimius Severus and family: Septimius, Cohen 2, 77, 355; Septimius and Julia Domna, C. 1; Septimius, Caracalla, and Geta, C. 1; Septimius, Julia, Caracalla, and Geta, C. 5; Julia, 177, 193; Caracalla, 116, 117, 347, 430 (var. *rev.* to r.), 660; Caracalla and Plautilla, 1; Caracalla, Septimius, and

of Greece under Count Capo d'Istria, also 26 British ferry tokens.

Col. H. W. Morrieson, F.S.A., showed 4 very fine multiple talers of Christian Ludwig, Duke of Brunswick and Lüneberg.

Mr. H. Garside showed an Albanian silver five francs, two francs, and franc, nickel lek, half lek, and quarter leku, bronze tenth and twentieth leku, all dated 1926, except the franc which is dated 1927.

The President read a short paper on the general nature of Coin-Finds, the deductions that might be made from them, and the circumstances which caused their burial.

JUNE 18, 1931.

ANNUAL GENERAL MEETING.

PERCY H. WEBB, Esq., M.B.E., President, in the Chair.

The Minutes of the Annual General Meeting of June 19, 1930, were read and approved.

Messrs. H. Garside and P. Thorburn were appointed scrutineers of the ballot.

The following report of the Council was laid before the Society:

The Council have again the honour to lay before you their Annual Report on the state of the Royal Numismatic Society.

It is with deep regret that they have to announce the death of the following six Fellows of the Society:

Col. A. H. Coles
Maj. Crompton-Roberts
Mrs. Wilfred Cripps

H. W. Monckton
E. E. P. Rose
F. J. Thairlwall

They have also to report the resignation of the following Fellows:

F. Pierrepont Barnard	Paul Ruben
Arthur Colegate	R. B. Welch

Twelve Fellows have been removed from the Society under Bye-law 15.

On the other hand, they have to report the election of five Fellows:

The Duke of Northumber-	T. G. Barnett, Esq., F.S.A.
land	H. Herzfelder, Esq.
C. C. Browne, Esq.	B. A. St. John O'Neil, Esq.

The number of Fellows is therefore:

	Ordinary.	Honorary.	Total.
June, 1930	248	11	259
Since elected	5	—	5
	253	11	264
Deceased	6	—	6
Resigned	4	—	4
Removed	12	—	12
	231	11	242

The Council have also to report that they have awarded the Society's Medal to Miss Helen Farquhar in recognition of her original work on the Tudor and Stuart periods.

The Treasurer's Report, which follows, was then laid before the Meeting:

STATEMENT OF RECEIPTS AND DISBURSE.

FROM JUNE 1ST, 1930,

Dr.

THE SOCIETY IN ACCOUNT

	£	s.	d.
<i>To cost of Numismatic Chronicles</i>	272	17	11
„ <i>Plates</i>	9	12	3
„ <i>Catalogue of Lantern Slides</i>	65	10	0
„ <i>Rent of Rooms</i>	50	0	0
„ <i>Refreshments, &c.</i>	6	2	1
„ <i>Lantern Expenses</i>	6	9	0
„ <i>Insurance</i>	4	14	5
„ <i>Bookbinding</i>	4	19	5
„ <i>Sundries</i>	12	5	3
	£482	10	4
<i>By Balance at Bank 31. 5. 31. carried forward—</i> £		s.	d.
General Account	186	4	8
Research Account	4	2	5
	190	7	1
	£622	17	5

MENTS OF THE ROYAL NUMISMATIC SOCIETY

TO MAY 31ST, 1931.

WITH G. C. HAINES, HON. TREASURER.

Cr.

	£	s.	d.	£	s.	d.
<i>By Balance at Bank 1. 6. 30. brought forward—</i>						
General Account	198	10	8			
Research Account	3	19	3			
				202	9	11
<i>By Subscriptions—</i>						
Ordinary	229	7	6			
Entrance Fees	5	5	0			
				234	12	6
<i>By Sales of Chronicles—</i>						
Current Numbers	112	2	0			
Old Numbers	13	0	0			
				125	2	0
<i>By Contribution towards Plates</i>				1	2	0
<i>By Dividends and Interest</i>						
£200 5% Conversion Stock 1944-64 (N.B. Market price 106½ = £212 10s. 0d.)	10	0	0			
£942 London Midland and Scottish Railway, 4% Preference Stock (N.B. Market price 45½ = £428 12s. 4d.)	37	13	6			
	47	13	6			
Less Income Tax at 4s. 6d. in the £	10	14	6			
				36	19	0
<i>By Income Tax Recovered</i>						
Three years ending April 5. 4. 30				22	12	0
				£623	17	5

G. C. HAINES, *Hon. Treasurer.*

Audited and found correct,

LEOPOLD G. P. MESSENGER, } *Hon. Auditors,*
HENRY GARSIDE, }

June 11, 1931.

The Reports of the Secretary and Treasurer were adopted on the motion of the President.

The President then handed the Society's Medal to Miss Farquhar, and said :

The Council of this Society has entrusted me with the performance of a very pleasing duty, one which no predecessor of mine in this Chair has ever yet actually performed, namely the presentation of the Society's medal to you, the first Lady Medallist.

You have selected as the principal fields of your research the spacious times of the Tudor Dynasty and the troubled reigns of the Stuarts, periods of which the history has come down to us touched with the glamour of romance, and you have enlightened and beautified it by your careful historical research and strong artistic sense.

The medallic art of England reached its zenith in those days and several of its finest exponents owe it to you that we appreciate them at their true value. You have treated in our *Chronicle* of the influence of Nicholas Briot, Holle, and Roettier, and your attribution of the Phoenix badge of Queen Elizabeth to Reutlinger and discovery of the handiwork of Nicholas Hilliard in the gold Armada medal have ensured to them their proper places among the aristocracy of art.

You joined our Society in 1904, and I have here a list of 20 papers which bear your signature, 12 of which are in our *Chronicle*. If I must choose any for special commendation where all are so good, I would select those which appeared in the *British Numismatic Journal* and gained you the Sanford Saltus Medal. Under the somewhat modest title "The Portraiture of our Stuart Monarchs on their Coins and Medals" you produced a work of great numismatic and historical value. It was the result of most careful study and laborious research, and your choice of the numerous illustrations which embellish it was excellent.

A very qualified critic has said : "The volume is full of accurate transcription from Manuscripts, of careful historical

research, and of artistic criticism based on comparison with line and colour portraits.

"She lightens her detailed study with a true affection for the objects with which she deals, and her human interest in the artists and the subjects which they portray brings the study of medallic art into a refreshing atmosphere."

Another notable book is that in which you have discussed "Royal Charities and Touch Pieces for the King's Evil". Those publications and many others have amply justified the Council's decision. Your work was a labour of love, and the writing of those papers was, I am sure, as great a pleasure to you as the reading of them has been to us.

Our medal is given in recognition of sound numismatic achievement, and on that ground alone, but we have not counted it against you that you have been a constant attendant at our meetings and, when difficulties have arisen, a generous helper of our Society.

May I add that your uniform kindness and pleasant courtesies have personally endeared you to all of us.

In reply Miss Farquhar said :

Mr. President and Fellows of the Royal Numismatic Society,

Words fail me with which to express the high appreciation I have of the very great honour you have conferred upon me in awarding me the blue ribbon of Numismatics, for such is the medal of our Society. I cannot thank you enough. It is the proudest moment of my life and one of the happiest. The proudest because in my wildest dreams I never aspired to such honour. The happiest because of the evidence your choice affords of your Council's friendly desire to encourage such small efforts as I have been able to make towards elucidating some problems of Stuart history. If I have been at all successful in clearing away stumbling-blocks from the bypaths of seventeenth-century research, it has been by your help and that of the sister society of British Numismatics, whose medal I am also

proud to own. Without your co-operation and encouragement I could have accomplished nothing. And may I specially thank our Editors for the constant kindness, patience, and courtesy, and above all the friendly help they have extended to me in my visits to the Department of Coins and Medals, during the past thirty years, ever since I first began to study within the walls of the British Museum.

But it may interest some of our younger Fellows to know that it is about sixty-five years ago that my collection was begun by the gift from my mother of a series of little medals representing French celebrities, which she brought me from the Paris Exhibition, and it was yet in my nursery days that, attracted by Wyon's charming head of Queen Victoria on the threepenny-bits of my weekly allowance, I would get an elder sister to exchange them, when I wished to spend my little store, that they might return to me in due course. My father trained my eye in the appreciation of beauty on a small scale in the miniatures in which his soul delighted, and during his lifetime I had little leisure for individual pursuits. But it was again the same sister whose gift in later years of Dr. Hill's *Greek Coins and their Parent Cities* first directed my attention to that most beautiful branch of our science. The unfortunate purchase of a Greek forgery, however, led me to think it were better to turn again to the period of art history with which I was most familiar, the seventeenth century, and to pursue the study which has always fascinated me in the evolution of the hammered to the milled coinage. And I have found it wiser to dig in the archives of the Public Record Office and the British Museum, clothed in a language that I could understand, rather than to wander in Greek fields beyond my powers of comprehension.

From such small beginnings you have raised me to the height of honour, to which I had never hoped to attain, in the award of the medal, which will ever be one of my greatest treasures, and I thank you from the bottom of my heart.

The President then delivered the following address :

THE PRESIDENT'S ADDRESS.

You have heard the reports of our honorary officers. The number of the Fellows has fallen during the past year, but that result is largely due to the removal from our roll of twelve names of persons whose addresses for the most part are now unknown, and who have for some years neglected to pay their subscriptions.

Your late Treasurer was perhaps too slow to move in such cases, influenced by the fact that he was on one or two occasions able to recover moneys long thought to be lost. His successor, like a new broom, has very wisely swept clean.

I venture to hope, however, that we shall all make strenuous efforts to bring in new Fellows during our coming year. There are so many men and women who, even if not yet numismatists, have sufficient interest in "old coins" to make it worth their while to join us and so gain knowledge and interest.

We have to regret the deaths of six of our Fellows. Three of them were not well known to us personally, but Horace W. Monckton was in former years a constant attendant at our meetings. He was a sound numismatist and a man of great courtesy and kindness. His interests were wide, and ably embraced law, geology, and botany. He attained high office in both the Geological and the Linnean Societies.

He was with us one evening last year and expressed his regret that the clashing of the Linnean meetings with ours prevented his constant attendance here.

It becomes my duty to review the work of the Society during the past year.

Speaking in the manner of the learned doctors of the Middle Ages, I may say that the thesis I have to submit to you is "That this Society and its Fellows are doing good and useful work".

In this advanced and material day, when politicians and reformers are apt to forget that human nature is more

permanent than the everlasting hills, and that like causes always produce like effects, the knowledge of history becomes more important than ever, and the historical information which our science can supply is of increasing value.

While there is much written material relating to medieval and modern times which is still unused, that is less so with regard to more ancient days.

The works of the old historians, panegyrist, and other writers have been sought out, read, and, for the most part, digested by the students. The critical may yet dispute as to the true meaning of passages here and there, but the main lessons are learnt.

That is by no means true of the ancient documents which we study—the coins. The stories which they bear are not so clearly written that they can be read without long and meticulous labour, but they are there, and, to a much greater extent than it would at first sight appear, they are as yet but imperfectly read.

The numismatist of to-day must, if he is to do good work, be somewhat of a specialist, a hard worker, imaginative and yet able to keep that imagination under due control. Such a man will gain great pleasure and reward from his work and will build well for those who follow him.

The gift by Mr. Pearce of the portrait medal of Dr. John Lee, my first predecessor in this Chair, led me to consider the conditions under which our forefathers worked in the days when this Society was founded. They had not the advantage of the standard works and corpora on which we rely. Hawkins and Ruding had written; the chief works on ancient coins were those of Eckhel, Banduri, Vaillant, and Tanini. There was no Cohen, no Mommsen, no Evans, no British Museum Catalogue.

So the early contributors to our *Chronicle* found unoccupied fields for their labours in all directions. We may envy them in that they could sit down and write an acceptable paper on almost any numismatic subject with very little preparation or research. Many of the papers which they did write were very useful in their day, though some

would fail both in style and matter to satisfy our present Editors.

I noticed one by no less a person than Martin Tupper on some finds of an unimportant character, on and near Farley Heath, in which he rhapsodizes as follows:

"The commonest little bit of old copper money resuscitated by himself from its untouched grave of sixteen hundred years has more of interest and value in the eyes of a numismatist than the choice lot of a Numismatic auction."

And continues:

"But I am rambling; pardon, Sir, the prolixity of my enthusiasm—being a Numismatist, you will,—and still bear with me while, as briefly as possible, I add the little all I have to say."

Turning to our latest issues we find that the Roman period, which had been but inadequately explored by our predecessors, is still attracting much of our attention, but we have not neglected other series. Important papers on Greek, Oriental, and English issues have found their places in the *Chronicle*. One may particularly contrast the care with which coin hoards are now described and catalogued with the meagre records of former days, and we have before us some excellent recent papers of this class.

First, a very useful paper by Mr. E. S. G. Robinson on a portion of a Greek hoard from the Nile Delta, probably deposited in the second half of the fifth century B.C. It comprised thirty-one silver coins, of which three were previously unpublished, and eight dumps. All the coins and one dump were marked with chisel-cuts, in most cases passing right through the flan.

Mr. Robinson considers, no doubt rightly, that the cutting was as a guarantee of goodness and not by way of demone-tization, as undoubtedly it was on Roman coins used as votive offerings and by our own officials who, fifty years ago, were wont to cut light sovereigns brought into Somerset House. The author finds in the fact that an unstruck dump is thus cut a confirmation of Dr. Regling's opinion that the

pieces of unstamped silver often found in early Greek hoards were not mere material for the coins but were intended for circulation. Here again the Greek practice differed from that of Rome, for some Roman hoards have comprised strips or blanks of metal evidently intended to be coined.

It seems that this Egyptian hoard was divided into three parts by the finders, and the second section came under the notice of Mr. E. T. Newell, who contributed a note thereon to the *Chronicle*. Also Mr. Robinson was enabled, by the acquisition by the British Museum of other coins originally in the first part, to add some further particulars, including those of two more chisel-cut cast dumps. The third part has not been traced.

Next the Warren hoard of Tarentine coins is dealt with by Monsieur M. P. Vlasto, who adds considerable detail to the standard work of Sir Arthur Evans on this subject, and suggests some modification of his conclusions.

As to the acceptability of these suggestions I must leave it to Greek numismatists to decide, especially as we have not yet had the advantage of hearing the views of Sir Arthur on the matter. The information which M. Vlasto has noted with reference to other finds of these coins will be very useful.

We may, I think, congratulate our Editors on the liberality and excellence of illustration which they have accorded to these and other recent papers. Some of us in past years have mourned the stern restrictions imposed on us in this matter.

Part IV of the *Chronicle* for 1930 contains one of the series of notes by Dr. Hill on the Greek coins acquired by the British Museum during the previous year; in this case 1929. Many of us look forward to these notes and greatly enjoy them. I hope that their author, though he has now climbed so far above us on the heights of Parnassus, may yet find sufficient time to continue the series.

The present record describes many useful accessions to the National Collection. The doubtful question of the

attribution of certain issues to Temesa or Terina arises in respect of the first coin published, the balance of evidence being now in favour of the former city.

The series of Mende and Athens in which the Museum was already strong have been added to by generous gifts, in the latter case from the collection of our Fellow, the Very Reverend Edgar Rogers. Another notable addition is an extremely rare tetradrachm of Colophon in excellent condition, the only other known specimen being a poor one in the French National Collection.

Light is also thrown on the coinage of Rhodes by the four coins which are unquestionably the most artistic of the acquisitions. To my eyes the most beautiful is No. 28, presented, it is pleasant to see, by Dr. Hill himself. There are numerous other important pieces, including two fine Persian coins from the collection of Colonel Allotte de la Fuye. The Museum certainly did well in 1929.

Dr. Hill has also contributed a note on Alexandrian and Ptolemaic coins found in England, with a list of their find sites. He concludes, undoubtedly correctly, that they arrived here in course of trade.

Before passing to the Roman papers I may perhaps diverge for a moment from the course of this address to thank Colonel Allotte de la Fuye for assistance kindly rendered during this year. There was published in the *Revue Numismatique* of 1901 a description by him of a coin found in France which was ascribed to a previously unknown Emperor or Usurper named Domitianus. Doubt was felt as to this, for many of the early coins of the Emperor Aurelian bear or DOM. DOMIT., and it was suspected that there might have been a misreading of one of these. The Colonel very kindly obtained casts from the Musée Dobrée at Nantes, where the coin is, and presented one to the British Museum and one to myself. The attribution is undoubtedly correct, and I think that Domitianus must have been the General of that name who, under Aureolus, defeated the Macriani. The style of the coin is Gallic and one would be inclined to suggest that Domitian may have made a snatch

at power in the troubles which surrounded the last days of Postumus, and appear to have been allayed by Victorinus.

My learned predecessor in this Chair, Sir Charles Oman, in his presidential address of last year dealt shortly with the paper of Sir Arthur Evans on the Arras Find, which had been read, but not then printed. It is a paper of such great importance that I may be forgiven if I make a further reference to it. A very valuable part of it is that in which its author discusses the evidence which the hoard provides with reference to the transition from the standard of the aureus to that of the solidus. He considers that the hoard was collected, and probably deposited, in the second half of the year A.D. 305 or the first half of the next year. During or at some time before 290, the weight of the aureus was fixed at 5.45 grms., or 60 to the pound of gold. Sir Arthur Evans would attribute this change to 286, but I venture to think that that date is too early. Some authors have considered that the next change, that to the standard of the solidus of about 4.40 grms., or 72 to the pound, did not take place till 315, or at least that the regular issue of solidi did not commence until that date. M. Jules Maurice would place it in 309, and even that year is three years later than the deposit.

I have endeavoured in a recent paper to show that the Reform of Diocletian was in fact introduced at different times in different mints, and in this find we have, as our author points out, evidence which shows that the change from the aureus to the solidus took a similar course. We have here coins and medallions attributable to both standards. Most of the larger medallions in the hoard conform to that of the aureus, but there were several coins, including a medallion (a denio) of Constantine the Great as Caesar, which conform to that of the solidus. The denio weighs 40.25 grms., and is therefore even somewhat short of that standard.

Sir Arthur Evans suggests that the origin of the reduced standard may be looked for in Britain, and points out that though when Carausius rebelled the older Roman standard

for aurei, 70 to the pound, was in force, the British coins never reached it, but were in fact struck at about 72 to the pound (which we may note was the standard of Tetricus) and some of the coins, struck by Carausius in the names of Diocletian and Maximian, were actually in the Arras hoard. Sir Arthur thinks that the influence of London as a mercantile and financial centre was already great in the Roman Empire, and so suggests (citing a mass of evidence which I have had to condense into a very few lines) that the new standard of the solidus had appealed to Chlorus and his greater son, and was already in tentative issue. It remained to the son to make it universal.

The complete and detailed history of the Reform of Diocletian and the modifications thereof effected by Constantine cries aloud to be written, and the conclusions of this great paper will be of much importance to him who undertakes it.

The publication of the paper led to the communication to this Society by our Honorary Fellow and Medallist, M. Jules Maurice, of a very imaginative and poetical note on the meaning of the legend REDDITOR LVGIS AETERNAE. He desired to interpret it as a reference to the recovery by Chlorus of the northernmost part of Scotland and the "Isles of the Midnight Sun". But the medallion bears the title of Constantius as Caesar, his Scottish victories were not gained until A.D. 306, when he had reached the higher dignity, and there is no historical evidence that he actually conquered the whole of Scotland. Attractive as the theory was, it did not seem possible to accept it as "proven".

Two valuable papers dealing with the pre-imperial denarii have been read to us, and throw much light on those coins. The first, by Mr. Sydenham, dealt with the symbols which appear on the coins of Papius and Roscius Fabatus. He conclusively proved them to include the badges of the Trade Guilds of Rome and suggested that they were in the nature of propaganda for the democratic, Marian, political party.

The exact dates of the issues are still in doubt, but it is probable that they are connected with the struggle which

led to the temporary disbandment of the Guilds by the aristocratic Senatorial party in 64 and their revival in 58 B.C. We get a valid and very interesting explanation of marks which have perplexed many of us, and a glimpse at the organization of business life in Rome. In February last Mr. Sydenham also described two hoards of Roman silver coins.

The other paper, by Mr. Mattingly, on the minting places of the earliest denarii, opens to us a new and attractive field for research. He makes an unassailable case for the proposition that several mints were at work, and indeed one has only to examine the specimens in one's own collection to confirm this, but his suggestions as to the sites of the actual mint cities require, and will no doubt receive, further consideration, which will, I think, be well repaid. From him, as from Africa, we have always something new.

He has also published a short and interesting note on Britannicus and his connexion with Titus, and his note on the legend FEL. TEMP. REPARATIO was read to us and fully discussed.

Another find of great importance to Romano-British numismatics has been described in our *Chronicle* by Mr. A. H. Baldwin, into whose competent hands it fell, and by whom the coins were cleaned with surpassing skill. It consisted of 298 coins, 27 of which were continental, mostly of the Gallic Empire, the remainder being all Romano-British pieces.

A considerable number of them bore new types or variations of those already published.

They were found in Essex, and the proportion of them attributable to the mint which used the Mark C was considerably larger than usual. I wish that I could claim that as conclusive evidence in favour of the attribution of that mint to Camulodunum, but at most it is only a small testimony in favour thereof.

I personally owe much to Mr. Baldwin for this paper, for, though it did not suggest many new conclusions, it did much to strengthen some of those already arrived at.

Indeed, the information afforded by it and the other two important recent finds of coins of this period, at Linchmere and Little Orme's Head, goes far to render a chronological arrangement of the coinage of the two British emperors possible.

Unfortunately, the Little Orme find still awaits full description by its fortunate possessor, Mr. Willoughby Gardner. I appeal to him to deprive us of it no longer.

I am glad also to see in our *Miscellanea* a very useful note by Mr. Glen Taylor on a small hoard found at Neath several years ago, which at last fortunately attracted his attention. Unfortunately, it was not in good condition or complete; many coins were illegible, and many had been dispersed. Among those which are noted are 27 of Carausius and one of Allectus. For once, the C mark was identified more often than that of London. There were some scarce types and, as always, a few slight new varieties.

Mr. Salisbury continues to deal with late fourth-century problems. He thinks that the date of the Weymouth Bay deposit was not much later than A.D. 395, and considers that, with the assistance of the Groveley Wood hoard and the Richborough site finds, it is possible to say with reasonable certainty what the coinage in circulation here was at that period. In the Weymouth Bay hoard there were about 30 radiate coins of the Gallic Empire, and I gather that they were all from the mints which I describe as "irregular"; that is that they were small pieces of similar module to the Valentinian and Theodosian issues. Their small size had preserved them while the larger pieces which came from the regular mints of Gaul had been withdrawn from circulation, perhaps to be used as metal for the smaller issues of the intervening years.

That reason seems hardly to cover the immediate disappearance of the coinage of the British Emperors from all the hoards deposited after the recovery of Britain by Constantius Chlorus.

I think that Rome took measures for the suppression of their coins which it did not take with reference to those

of Gaul, and I think, with all respect to Mr. Salisbury, that though the first irregular coins were struck in the reign of Tetricus yet many were struck after his death.

Mr. O'Neil makes his first appearance in our pages with a short description of a find made in Northamptonshire. It comprised some 800 coins, commencing with an As of Verus and a few third-century pieces, including one of Allectus—an exception which tends to prove the rule above laid down—52 coins of the House of Constantine, and over 700 of the Houses of Valentinian and Honorius. His results confirm those of Mr. Salisbury, and the hoard may possibly be of slightly later date than that of Weymouth, as the proportion of coins of Arcadius and Honorius is greater.

In our *Chronicle* for 1908 there is a paper by Dr. Milne on "The Lead Token Coinage of Egypt under the Romans", and to this he has now added a valuable supplement.

These irregular or supplemental issues of coins of low value are always curious, and offer difficult problems for solution. Pinkerton contemptuously dismissed the interest which numismatists of his day were beginning to take in our own tradesmen's tokens as "risible", but a later writer has pointed out that, as the method which was taken to provide for the needs of the humbler classes, they are worthy of close study. In our case they were provided by the humbler classes themselves. In the Roman Empire the necessity for small change must have been severely felt, but, except by the Gallic Irregular Mints, little effort seems to have been made to provide it.

In the paper of 1908, itself a supplement to a chapter which Dr. Milne had previously written for Messrs. Grenfell, Hunt, and Hogarth's volume on the Fayum Towns, he fixed the period of issue of these coins as from the reign of Marcus Aurelius or perhaps that of Antoninus Pius to that of Gallienus, and in that and the present paper he describes a large number of specimens.

The acquisition by the Ashmolean Museum of a collection of these pieces has enabled him to carry the classification of them, and their attribution to the nomes in which they were

probably issued, a considerable distance forward, but not to completion.

The plate which accompanied the article of 1908 was unsatisfactory, and gave little hint of the interest which the coins invite. The new plate is much better, and emphasizes the great variety in size as well as design which is found among them.

The types are Egyptian in many cases, but Dr. Milne points out that some at least of their designers owed their inspiration to Greek sources. I have exhibited a few specimens to-night: among them are some which show a Roman origin, and a number which bear lettering that needs explanation.

It is a curious coincidence that, in the number of our *Chronicle* which deals with the outstanding medallions of Arras, there should be described a 200-rupee piece, which is figured in the plates to Mr. R. B. Whitehead's third part of his paper on "Notable Coins of the Mughal Emperors". Part I appeared in 1923 and part II, which was published in 1926, was then stated to be the conclusion: I am glad to see that that was wrong. Though the second part ends with the coins of the last of such emperors the examination of further collections at Oxford and elsewhere has brought to light more information. The great silver piece above referred to was struck in Delhi by Aurangzeb in 1705. The coin is at Gotha and is one of a number of exceptional pieces of which there are records in Indian native chronicles. It appears that they were, as we suppose that the Roman medallions also were, "hoarded as stores of value, and occasionally presented to ambassadors, diplomatic agents, and other distinguished persons as complimentary gifts or souvenirs of imperial favour and munificence". I quote Mr. Hodivala. Gold pieces of one, two, and three hundred mohurs are recorded, and it is believed that at least one specimen of the hundred mohur piece still exists. Of large silver pieces, that which is described seems to be now unique: these coins, "hoarded as stores of value", have probably represented too much

unproductive capital to be retained. The paper also describes numerous other scarce pieces.

I now have to mention several papers on English subjects.

Dr. Brooke publishes a find of 31 nobles made in June 1930 at Borth, Cardiganshire. At that time I was collecting press notices of finds and was appreciating the lack of knowledge and accuracy with which numismatic subjects are popularly treated. I received several cuttings with regard to this find which described its contents as thirty Tudor gold coins; one paper adding that they were perhaps the hoard of a pirate. One coin was not forthcoming at the Coroner's inquest; the remaining thirty comprised two nobles of Richard II, one of Calais, seven of Henry V, and twenty-one of Henry VI, of which two were of Calais and all the others of London. The finders got the full value of the coins, and honesty was here certainly the best policy. The coins formed a convenient supplement to the author's paper of 1930 on the Privy Marks of Henry V and comprised a surprising number of new dies of either obverse or reverse used on the coins of that king. Those of Henry VI were not so prolific in varieties, and in that respect conform to our previous knowledge. The hoard afforded incidental evidence that London and Calais were at work before the opening of the York mint, which, though directed in 1422, did not take place till the summer of 1423.

Mr. C. E. Blunt has given us an important paper on the mint at Berwick-on-Tweed. He traces the chequered career of that town from 1296, when Edward I attacked the Scots. The town, but not the castle, was lost late in 1297, and recovered by the English in the next spring. Again from 1318 to 1333 it was in Scottish hands, and in 1355 the English once more lost the town, but not the castle. The mint may have been established in 1296, though there is no certain evidence of the date of its earliest issues. Its work and style differ much from those of the southern mints, and the author discusses the possibility that even during the Scottish occupations coins were issued in the names of the English kings. Considering his evidence, we can only say

that the possibility certainly exists, but can hardly raise it to a probability. Still the status of Berwick could almost be described as extra-territorial. Mr. Blunt points out that, except for a short time in the reign of Edward II, the dies used were locally produced, not supplied from London as was the case in other mints. On the reconquest by England in 1333 the mint, if not actually found in existence, was almost at once reopened. The moneyer died in 1337 and the mint fell into abeyance till 1344, when a new, presumably local, moneyer was found. His issues were small and probably ceased very soon. The author also discusses the possibility that Berwick was issuing pence in and after 1331 when that coinage was suspended at London and Canterbury.

Mr. L. A. Lawrence read a paper on a find of English fourteenth-century coins at Durham.

Dr. Brooke describes two unpublished English medals. One of them is neat and so designed as to tell its story with great detail. It is remarkable that it has not attracted the attention of the historian and has remained so long unnoticed. It would not perhaps appeal so much to the artist. The two sides contrast the uncertain conditions of the last days of the reign of Queen Anne, when Jacobite intrigue was rife, with the peace and prosperity introduced by the illustrious House of Hanover, and the designer has made full use of his space. The obverse indicates moderate prosperity, with Jacobite tares growing in the wheat, the reverse shows full barns, a harbour crowded with shipping, and the burning of the tares. The very sky is devoted to a sarcastic attack on Louis XIV, le Roi Soleil. The sun is first seen in splendour, though with clouds approaching it, and then in almost total eclipse, the result of the improved position of England in continental politics which, in the designer's opinion, arose from the change of dynasty. The medal is almost comically effective, even if it does offend some canons of medallie art, and, while it purports to deal with the year 1714, gives in the clouds the date of an actual eclipse which has been pressed into

the service of the allegory, though it took place in May 1715.

The other medal described, a new variety of Bower's Restoration Medal of 1660, shows the destruction of the giants of rebellion by Charles II, who, on one side of the medal, is portrayed as Jupiter, with wings which appear to spring from the lower part of his back. Examination of the reverse of the medal corrects this erroneous impression, and shows that Jupiter is in fact riding on his eagle. We may agree with Dr. Brooke that both in design and execution the medal is astoundingly bad.

Very different is the artistic merit of the badges (produced not many years earlier), which our Medallist, Miss Farquhar, illustrates in aid of her paper on the Forlorn Hope Medal of Charles I, the Victoria Cross of that day. The author traces the history of the badges and, to our regret and her own, makes it clear that the beautiful piece No. 1 on her illustration is not the true Forlorn Hope Medal.

That paper is the last, but by no means the least interesting, on which I need comment, and I venture to submit that the contents of our *Chronicle* for the past twelve months do indicate that my thesis is proved, and that our Society is virile and active, and is doing valuable numismatic work.

The activities of the Fellows have, however, been by no means confined to the pages of our publication. The year has seen the issue of the second volume of the *Catalogue of Roman Coins in the British Museum*. Its author, Mr. Mattingly, marches with the times, and this volume seems to me to be a distinct advance on its predecessor. The special introductions to the reigns are particularly pleasant reading, and the interpretations of the types are clear and charming. The plates are an immense improvement on those of the first volume; indeed I have seen none better.

The publication of such a work would suffice most men for a year, but we have also to record the issue by Messrs. Mattingly and Sydenham of the third volume of their work

on the Roman Imperial Coinage. Volumes I and II were so good that I hesitate to say that this one is better; but in fact it is. The authors have availed themselves of the experience and facility which they gained from the previous volumes, and the book reaps the benefit thereof. The plates are excellent.

Mr. Goodacre continues his services to Byzantine numismatics by the publication in book form of Part II of his handbook. His work is most readable, though very concise. I envy him his capacity for the presentation of clear-cut historical miniatures of the various emperors and empresses. He is providing us with a much needed account of a period which was neglected largely because books on the subject were hard to acquire.

His next part is proceeding in "another place", where also we may find Mr. Garside's notes on Modern Issues, which will be a mine of information to those who follow us.

The Very Rev. E. Rogers and the Rev. E. A. Sydenham have dealt with Greek and Romano-Greek subjects; Mr. Forrer has not exhausted all his knowledge of medals and medallists; and Mr. Pearce has commenced a most useful and, I know, most laborious publication on the "Coinage of the Valentinian and Theodosian Houses", a period which from the collector's point of view is dull beyond words, but, from that of the historian, full of information, much of which has not hitherto been unearthed. May I hint that abbreviation should not be carried too far. It is no doubt essential, but no one appreciates more than I do the difficulty of employing it without hampering the reader.

Our foreign brethren have done steady work during the year. I may note a study by Strack of the coinage of Trajan, which is the result of most painstaking collection of material; a great volume on German Medals by Habich, very finely illustrated; a work of high merit on the Coins of Syracuse, by Erich Boehringer, with which I may couple a study of certain Syracusan dekadrachms by Albert Gallatini.

America has provided two useful find Catalogues, one by A. R. Bellinger of the coins found at Corinth in 1925,

the other by D. M. Robinson of those found at Olynthus in 1928. The numerous plates of the latter show photographs of the actual coins. While admitting the disadvantages of the usual method of photography from casts, I still feel that they are more than counterbalanced by those of the direct method, at least in the case of coins in fair condition.

In conclusion, I have personally to thank the Fellows of the Society most heartily for the patience and kindness with which, with experience of a series of most learned and able Presidents, they have yet borne with my poor efforts to fill the office, and for the constant support which they have one and all accorded to me.

Mr. Harrison proposed and Mr. Garside seconded a vote of thanks to the President for his address.

The President then announced the result of the ballot for office-bearers for 1931-2 as follows :

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After proposing a vote of thanks to the Secretaries and Treasurer, and the Auditors and Scrutineers, the President adjourned the meetings of the Society till October 15.

8

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